

### Letter A-4 - City of Chula Vista

- A-4-1** Introductory comment is noted. The County disagrees with the statement that the DEIR is inaccurate and fails to adequately disclose the impacts of the proposed Project. The comment does not raise any new issue or identify any specific deficiency in the DEIR; for that reason, the County provides no further response.
- A-4-2** The "Notice of Preparation" (CEQA Guidelines Section 15375) is a brief notice sent by a lead agency to notify the responsible agencies, trustee agencies, the Office of Planning and Research, and involved federal agencies that the lead agency plans to prepare an EIR for the Project. The purpose of the notice is to solicit guidance from those agencies as to the scope and content of the environmental information to be included in the EIR. Throughout the preparation of the DEIR, the list of projects is updated to ensure all new information is considered in the analysis of project-specific and cumulative impacts. The comment does not identify any specific deficiency in the list of projects considered in the preparation of the DEIR; therefore, the County provides no further response to this comment.
- A-4-3** The County disagrees with this comment. Identification of mitigation measures has not been deferred until after Project approval. Mitigation is included in the EIR and is incorporated as a condition of approval for the Project. Mitigation measure M-AE-1 does not defer mitigation; it simply recognizes that the grading, landscape, and improvement plans have not yet been submitted for approval. Once submitted, they will be evaluated for compliance with the design measures in the EIR by the County. Mitigation measure M-GE-2d does not defer mitigation. As stated in mitigation measures M-GE-2a through c, mitigation is provided to mitigate rock fall hazards. Mitigation measure M-GE-2d has been reworded to clarify that at the time of final design, the geotechnical engineer shall certify that all mitigation measures to reduce level of significance of rock fall hazards have been implemented.
- A-4-4** The referenced changes in elevation are reflected in Figures 2.1-1A through 2.1-8B of the DEIR. These figures and visual simulations were utilized to analyze the impact to aesthetic resources.
- A-4-5** The PEIR Mitigation Measures MM 1 through MM 5 as listed in the comment will not be added to the FEIR. The DEIR tiers off of the PEIR; therefore the mitigation measures do not need to be repeated in the FEIR. Further, many of these measures are required of the Project by the County and are therefore not mitigation. A Mitigation Monitoring Program Compliance table has been created and is included as Appendix D-24, which analyzes the applicability of all mitigation measures found in the PEIR, as well as how they are met for the new Alternative H. A discussion of these measures has been added to Section 2.1.2 of the FEIR. Regarding MM 6, within Section 2.1.2.4(a) in the DEIR, the text "iconic architectural element" will be deleted, from the mitigation measure. The addition of architectural treatments up to 75 feet in height is a Project proposal and analyzed in the DEIR, which concluded the impacts to aesthetics and visual resources would remain significant and unmitigable.
- A-4-6** The County disagrees with this comment. Figure 1.0-11A does not show the elevation at which development would occur. While the water tank and edge of development appear to be in line from a birds-eye view, as shown in Figure 1.0-11A, they would not occur on the same slope of the mountain, and would not be at the same elevation, as shown in Figure 2.1-1B. The tank is located at an elevation of 950 feet, while the top of the residential development is at 799 feet in elevation. Therefore, Figure 2.1-1B will not be changed. The County concurs with the fact that Figure 2.1-6B is not consistent with the text provided in Section 1.0-25. Text in Section 1.2.2.2 of

the FEIR has been updated to correct this discrepancy and clarify that portions of Otay Lakes Road will be realigned, but that the road would largely maintain its current alignment.

**A-4-7** The County concurs with this comment. Mitigation measure M-AE-1 has been updated to specify that it is the final grading plans that will be reviewed, and text has been added to the discussion of the General Plan in Table 2.1-1. The Village Design Plan and the Preserve Edge Plan consistency with grading activities is already discussed in Section 2.1.2.4. A grading plan must comply with the approved Tentative Map and environmental analysis that is certified for the Project.

**A-4-8** The comment requests that the DEIR be supplemented with additional information regarding the proposed Project's rock crushing operations, such as the "source of the rock, the location of the crushing equipment, the distance the rock and crushed rock will be transported [and] the number of truck trips necessary." The comment further states that, if impacts from rock crushing are determined significant, mitigation measures need to be provided to reduce such impacts to levels below significant. The following response addresses the comment's request.

In response, Section 2.2, Air Quality, of the DEIR considered the implications of the proposed Project's rock crushing operations on air quality. Specifically, as discussed on pages 2.2-6 through 2.2-7 of the DEIR, under the impact evaluation for the Project's construction-related activities:

"[E]missions associated with rock crushing were quantified in a separate calculation, as the CalEEMod Model does not account for rock crushing. Emissions were calculated based on estimated amounts of rock generated from blasting (4,784,960 pounds), assuming tertiary crushing with water spray for control of fugitive dust. It was also assumed that the rock crusher would be powered by an on-site generator. Emissions associated with the rock crushing operation were included in the analysis."

As further explained on page 2.2-7, the analysis assumed that water sprayers shall be installed on the rock crushing equipment to control particulate emissions during crushing operations in accordance with Section 87.428 of the County's Grading, Clearing, and Watercourses Ordinance. This regulatory compliance requirement also was conservatively included within mitigation measure M-AQ-1. The DEIR's consideration of the Project's rock crushing operations is further substantiated by Table 2.2-4, Maximum Daily Construction Emissions, without Dust Controls, and Table 2.2-6, Maximum Daily Construction Emissions, with Dust Controls. Each table contains a line item quantifying the Project's rock crushing emissions, and assumes that the Project will result in approximately 49 days of rock crushing activities.

The DEIR's air emissions estimates for rock crushing activities were based on the best available data at the time of its preparation. In response to this comment, the estimate of the amount of rock crushing proposed by the Project has been refined. Further detail regarding the revised estimate of rock crushing emissions is provided in a technical memorandum, which is included as Appendix C-24 of the FEIR. Tables 2.2-4 and 2.2-6 of the FEIR have been updated to include the information presented in Appendix C-24. As provided therein, the Project will require approximately 225,000 tons of rock crushing and will result in approximately 130 days of crushing; a maximum of 4,000 tons per day would be crushed. Based on this revised estimate of rock crushing, the Project is still below a level of significance.

All rock that may require crushing is located on the Project site. Rock crushing will take place at various locations on the Project site, depending on need, source of rock, and noise constraints imposed by County ordinance. As discussed in Section 2.7, Noise, a buffer for rock crushing will

be determined based upon the duration of rock crushing activities and distance to noise-sensitive receptors. More specifically, mitigation measure M-N-4 requires that rock crushing activities be located a minimum distance of 1,000 feet, unless otherwise determined, from the property line of an occupied structure to address construction and impulsive noise generation; this approach complies with County Code Noise Ordinance Section 36.404.

All crushed rock will be kept internal to the Project site; there will be no export. To account for the transfer of material onsite, a travel distance of 0.25 mile on onsite unpaved roads was assumed in the emission calculations for haul truck trips, as shown on page 2 of the California Emissions Estimator Model's (CalEEMod) output files for construction emissions (see Appendix C-1).

The DEIR's analysis also accounts for the transport of material, including crushed rock, within the site during the construction period. The emissions from the haul truck trips were calculated using the CalEEMod. That model estimated the total number of haul truck trips per year to transport material within the site. The table below summarizes the total amount of material transported and the number of haul truck trips calculated by CalEEMod for each year of construction, along with the supporting page number within the CalEEMod outputs.

<b>Construction Year</b>	<b>Material Transported, cubic yards</b>	<b>Appendix C-1 CalEEMod Output Page Number</b>	<b>One-Way Haul Truck Trips</b>	<b>Appendix C-1 CalEEMod Output Page Number</b>
1	438,850	2, Year 1 Construction	109,713	6, Year 1 Construction
2	834,626	2, Year 2 Construction	165,047	5, Year 2 Construction
3	840,973	2, Year 3 Construction	210,243	5, Year 3 Construction
4	838,858	2, Year 4 Construction	209,715	5, Year 4 Construction
5	842,031	2, Year 5 Construction	210,508	5, Year 5 Construction
6	1,087,447	2, Year 6 Construction	271,863	5, Year 6 Construction
7	848,378	2, Year 7 Construction	212,095	5, Year 7 Construction
8	1,063,117	2, Year 8 Construction	265,780	5, Year 8 Construction
9	831,453	2, Year 9 Construction	207,863	5, Year 9 Construction
10	385,049	2, Year 10 Construction	96,262	5, Year 10 Construction
11	239,069	2, Year 11 Construction	59,767	5, Year 11 Construction

The haul truck trips associated with transport of crushed rock within the site are included within the totals presented above, because the amount of crushed rock to be transported is included within the total cubic yards of material. Based on the Project site's grading plan, it is estimated that a total of 225,000 tons of rock would be crushed for onsite use. According to the Los Angeles County Department of Public Works,<sup>1</sup> a cubic yard of loose rock weighs approximately 2,570 pounds. Converting 225,000 tons of rock to cubic yards results in an estimate of 1,863 cubic yards of rock to be transported within the site. The CalEEMod assumes that each haul truck carries approximately 4 cubic yards of material; as such, the number of truck trips that would be associated with transport of crushed rock within the site would be approximately 43,775 trips for the duration of construction. These trips represent a small portion of the overall number of haul truck trips (i.e., 2,018,856 trips) within the site that are associated with transport of material during grading activities.

To assess the significance of the Project's construction-related emissions, including those associated with the rock crushing operations, the DEIR relied on the County of San Diego's established screening level thresholds of significance, as presented in Table 2.2-3, Regional Pollutant Emissions Screening Level Thresholds of Significance. The DEIR calculated the maximum daily emissions during the construction period (see Tables 2.2-4 and 2.2-6), and compared that peak total—which is representative of all types of construction activity—to the County's thresholds. While it is not appropriate to evaluate the rock crushing emissions relative to the County's thresholds in a vacuum (because doing so would serve to ignore other construction-related emissions), the rock crushing emissions—on their own—would not exceed the County's thresholds (see Tables 2.2-4 and 2.2-6). These calculations have been updated based on the refined estimate of rock crushing proposed by the Project in the technical memorandum provided as Appendix C-24 to the FEIR. As shown in the technical memorandum, the updated maximum daily emissions attributable to rock crushing activities—on their own—would not exceed the County's thresholds (see Tables 1 and 2 in the technical memorandum). Further, the overall emissions associated with construction would decrease due to decreases in daily blasting amounts, as discussed in Response to Comment A-4-15. The conclusions of the DEIR are, therefore, unchanged.

Additional information regarding the Project's rock crushing operations is included in Appendix C-1 (Air Quality Impact Report) of the DEIR.

**A-4-9** The comment states that the DEIR does not provide information necessary to correlate the Project's additional tons of daily or annual emissions to anticipated adverse health impacts. In response, criteria pollutants are regulated by health-based standards, referred to as the National Ambient Air Quality Standards and California Ambient Air Quality Standards (see Subsection 2.2.1.2, Regulatory Setting, of the DEIR). As discussed in the DEIR, the San Diego Air Basin currently meets all National Ambient Air Quality Standards, with the exception of the ozone standard, and meets all California Ambient Air Quality Standards, with the exception of ozone and particulate matter standards.

While the DEIR acknowledges that the Project's emissions would exceed the County's screening level thresholds, as stated on pages 2.2-7 and 2.2-8 of the DEIR: "The number of future daily exceedances of the CAAQS or NAAQS attributable to emissions from any singular project are difficult, if not impossible, to predict at this time because of the many variables influencing air pollutant concentrations (e.g., background concentrations, meteorology and weather patterns,

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<sup>1</sup> See "Converting from Volume to Weight" worksheet, available at [http://dpw.lacounty.gov/epd/CD/cd\\_attachments/Volume\\_to\\_Weight.pdf](http://dpw.lacounty.gov/epd/CD/cd_attachments/Volume_to_Weight.pdf) (accessed on July 14, 2015).

effectiveness of regulatory programs, and availability of predictive computer models)."

Additionally, a technical memorandum addressing the correlation of additional tons of emissions and anticipated adverse health impacts is included as Attachment A4.1 to these Responses to Comments.

The technical memorandum provides an analysis of the Project's construction and operational emissions of ozone precursors (NO<sub>x</sub> and VOCs) as well as particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) in comparison with the regional emissions projected by the California Air Resources Board for 2020, 2025, and 2030. Emissions from construction were evaluated for 2020 and 2025.

Emissions from operation were evaluated for 2025 (project buildout) and 2030. The technical memorandum demonstrated that the Project's construction and operational emissions for NO<sub>x</sub> and VOCs are less than 1 percent of the regional emissions, and that a comparable percentage increase in O<sub>3</sub> concentrations would not result in an exceedance of the ambient air quality standard. Likewise, the technical memorandum demonstrated that the Project's construction and operational emissions for PM<sub>10</sub> and PM<sub>2.5</sub> are approximately 3 percent and 12 percent of regional emissions on a short-term (maximum daily) basis, and that a comparable percentage increase in 24-hour PM<sub>10</sub> and PM<sub>2.5</sub> concentrations would not result in an exceedance of the ambient air quality standards for these pollutants. The technical memorandum therefore concluded that the impacts would not result in significant adverse health effects from Project emissions.

Nevertheless, the EIR concludes that emissions of criteria pollutants are significant in light of the Project's exceedances of the County of San Diego's thresholds. The conclusions of the DEIR are unchanged.

- A-4-10** The comment requests information regarding (i) the duration of construction, and (ii) whether construction will be continuous. The comment also requests information regarding the number of construction workers anticipated during each phase of construction, and requests that the analysis consider whether the number of vehicles will impact the level of service (LOS) on any roadway in a manner that will adversely create a carbon monoxide "hot spot."

As discussed in Section 2.2, Air Quality, of the DEIR, construction activities are anticipated to last approximately 11 years. (See, e.g., Table 2.2-4, Maximum Daily Construction Emissions, without Dust Controls.) While the analysis assumes that construction activity will occur for 11 years, the focus—for purposes of rendering significance determinations—is on identifying the maximum peak daily emissions level (see DEIR Table 2.2-3, Regional Pollutant Emissions Screening Level Thresholds of Significance).

As for the number of construction workers associated with the Project's construction activities, the CalEEMod was used to estimate the number of construction-related worker trips. For example, as shown in the table below, it was estimated that 46 workers would work on grading during the first year of Project construction. This number was used to determine the number of one-way worker trips. The number of workers associated with each year of construction activity is provided in the CalEEMod outputs for each year; see Appendix C-1, page 3 of each of the CalEEMod daily emission calculation files for each year of construction. The table below provides a summary of the construction worker trips assumed for each year of construction as provided in Appendix C-1 of the DEIR.

<b>Construction Year</b>	<b>Construction Activity</b>	<b>One-Way Worker Trips</b>	<b>Appendix C-1 CalEEMod Output Page Number</b>
1	Grading	46	6, Year 1 Construction
	Utilities	20	

<b>Construction Year</b>	<b>Construction Activity</b>	<b>One-Way Worker Trips</b>	<b>Appendix C-1 CalEEMod Output Page Number</b>
	Building Construction	204	
	Paving	30	
	Architectural Coatings	40	
2	Grading	56	5, Year 2 Construction
	Utilities	20	
	Building Construction	220	
	Paving	56	
	Architectural Coatings	44	
3	Grading	56	5, Year 3 Construction
	Utilities	20	
	Building Construction	240	
	Paving	56	
	Architectural Coatings	48	
4	Grading	56	5, Year 4 Construction
	Utilities	20	
	Building Construction	232	
	Paving	56	
	Architectural Coatings	46	
5	Grading	56	5, Year 5 Construction
	Utilities	20	
	Building Construction	240	
	Paving	56	
	Architectural Coatings	48	
6	Grading	56	5, Year 6 Construction
	Utilities	20	
	Building Construction	578	
	Paving	56	
	Architectural Coatings	116	
7	Grading	56	5, Year 7 Construction
	Utilities	20	
	Building Construction	258	
	Paving	56	
	Architectural Coatings	52	
8	Grading	56	5, Year 8 Construction
	Utilities	20	
	Building Construction	330	
	Paving	56	
	Architectural Coatings	66	
9	Grading	56	5, Year 9 Construction
	Utilities	20	
	Building Construction	210	
	Paving	56	
	Architectural Coatings	42	
10	Grading	56	5, Year 10 Construction
	Utilities	20	
	Building Construction	72	

Construction Year	Construction Activity	One-Way Worker Trips	Appendix C-1 CalEEMod Output Page Number
	Paving	56	
	Architectural Coatings	14	
11	Grading	56	5, Year 11 Construction
	Utilities	20	
	Building Construction	256	
	Paving	56	
	Architectural Coatings	52	

Finally, as stated on page 2.2-9 of the DEIR:

“Construction traffic is not anticipated to significantly impact the [level of service] rating due to the intermittent and temporary nature of construction traffic. The construction vehicle trips correspond to approximately 135 daily vehicle trips at peak hour. When compared to maximum peak hour traffic volumes (i.e., 2,000 to 5,000 peak hour trips at various intersections on Otay Lakes Road and Heritage Road/Olympic Parkway), it can be inferred that the construction-related contribution to local CO concentrations is minimal and transitory.”

Therefore, the DEIR’s analysis concludes that construction-related traffic would not cause the creation of a carbon monoxide “hot spot” at local intersections.

**A-4-11** The comment states that the DEIR does not mention the onsite generator for the rock crushing equipment, conveyor, and truck loading equipment. The comment asks whether (i) the generator will be diesel powered, and (ii) the emissions required to transport rock to-and-from the crusher were quantified. In response, Appendix C-1 (Air Quality Impact Report) of the DEIR did assume that the generator in question would use diesel fuel. Section 2.2.2.2 and Section 2.2.2.3 of the FEIR have been updated to clarify this. Additionally, please see Response to Comment A-4-8 above for additional information regarding the analysis’ assumptions for haul trips.

**A-4-12** The comment requests additional data to support the DEIR’s assumption that “construction activities would occur at a distance reasonably considered to not have an effect on a sensitive receptor for approximately one (1) year,” in relation to the Project’s 11-year construction period. In response, construction activities would move throughout the site based on the proposed construction phasing. As there are 10 phases during the Project’s 11-year construction period leading to build-out, it is reasonable to assume that each phase will last for approximately one (1) year. Phases would be constructed at different times, and, due to the construction phasing, construction equipment would move throughout the site. Therefore, it is not reasonable to assume that construction equipment would be operating at the nearest point to the nearest sensitive receptor for the duration of the construction activities (11 years). In any event, the Project’s assessment of diesel particulate matter emissions conservatively used a worst-case scenario for purposes of the analysis, and assumed an 11-year exposure period. (DEIR, p. 2.2-10.)

**A-4-13** The comment states that the DEIR is required to make a “good faith estimate” to determine the existing conditions relative to respiratory-related health conditions in the Project area, and to forecast whether the Project’s emissions will result in increased health impacts. Please see Response to Comment A-4-9 above for responsive information.

- A-4-14** The comment requests that the “applicants” required to perform mitigation measure M-AQ-1 be identified, as well as the party responsible for ensuring that M-AQ-1 is adequately implemented. The comment also proposes several text revisions to mitigation measure M-AQ-1.

The County of San Diego—through enforcement of the CEQA-mandated Mitigation Monitoring and Reporting Program (MMRP)—will ensure that mitigation measure M-AQ-1 is successfully implemented. This measure will include development of a written plan, which will include the requirement to develop a Construction Management Plan that includes all of the measures identified in M-AQ-1, along with a monitoring program to ensure that the measures are implemented. Additionally, the applicants will ensure satisfactory performance of mitigation measure M-AQ-1 through the terms of contractual agreements with the Project’s contractors and subcontractors. The County (through its MMRP) and the applicants (through their contractual agreements) will ensure implementation.

The County concurs that haul truck loading equipment be outfitted with water sprayers. Mitigation measure M-AQ-1a has been revised in the FEIR to clarify that water sprayers, dust curtains, and/or other available best practice dust control measures shall be utilized during the crushing, conveying, and loading of materials to control particulate emissions during crushing operations.

Finally, the County disagrees with the proposed addition of a 2-minute idling limit for all construction equipment and vehicles. Idling limitations already are imposed at the state level via the California Air Resources Board’s Air Toxic Control Measure 13, which provides that idling time shall not exceed five (5) minutes unless more time is required per engine manufacturers’ specifications or for safety reasons. It is unnecessary to determine that a further reduction in idling times is operationally and technologically feasible, and whether the frequent start-up and shut-down of heavy duty engines is environmentally beneficial. As such, the County will defer to existing regulatory standards adopted by the state agency with expertise in the subject area.

- A-4-15** The comment requests that mitigation measures be identified to reduce emissions attributable to the Project’s blasting activities, as those activities create the majority of construction-related emissions. To begin, the analysis of blasting emissions has been updated based on refined information. The updated analysis is presented in a technical memorandum that is included as Appendix C-24 to the FEIR. As discussed therein, the blasting-related emissions levels would only occur for approximately 114 to 125 days during the proposed Project’s 11-year construction period (see, e.g., Tables 1 and 2 in the technical memorandum). And, emissions from blasting have been reduced due to refined estimates of the amount of explosives and associated blasting that would occur in a single day. NO<sub>x</sub> emissions were reduced by 38 percent, CO emissions were reduced by 50 percent, PM<sub>10</sub> emissions were reduced by 53 percent, and PM<sub>2.5</sub> emissions were reduced by 44 percent.

As for the comment’s request for mitigation to address blasting-related emissions, the following points should be kept in mind. First, the emissions from blasting are primarily particulates from soil and rock kicked into the air by explosives. Thus, many of the requirements of mitigation measure M-AQ-1 would serve to reduce blasting-related emissions. For example, by actively watering disturbed surface areas at least three times per day, particulate matter generation from blasting activities would be reduced. Second, two additional requirements also have been added to mitigation measure M-AQ-1, in response to this comment. Specifically, as revised in Section 2.2.5.1 of the FEIR, mitigation measure M-AQ-1 now requires soil stabilization pre- and post-blast, and imposes a temporary prohibition on blasting when wind gusts exceed 25 miles per hour.



**A-4-16** The comment proposes a number of mitigation measures to assist with the reduction of criteria air pollutant emissions from mobile sources, referring to Table 2.2-5 (Area Source/Motor Vehicle Emissions, Unmitigated) in Section 2.2, Air Quality, of the proposed Project’s 2015 DEIR. Since this comment was submitted, the County revised and recirculated the global climate change analysis for the proposed Project (see Section 2.10 of the 2019 Recirculation Package). These revisions incorporate modified and additional mitigation measures, many of which are consistent with the parameters of the commenter’s suggestions. For example:

- Zero-emission vehicle use and charging infrastructure is discussed in mitigation measure M-GCC-6.
- Carpooling and ride-sharing, transit use, and bicycle parking all are discussed with the Transportation Demand Management (TDM) strategies presented in M-GCC-1.

These modified and additional mitigation measures require the implementation of specific programs and features, as requested by the commenter. Many of these measures were previously part of the proposed Project through design features or existing regulatory requirements.

An assessment of each mitigation measure requested by the commenter (as shown in *italics*) is provided below.

- *Encourage low or zero-emission vehicles by designating a certain percentage of parking spaces for low or zero-emission vehicles.*

This measure already is required as a matter of regulatory compliance by the County of San Diego Department of Planning & Land Use’s Parking Design Manual (February 2013), a copy of which is available at [http://www.sandiegocounty.gov/pds/docs/Parking\\_Design\\_Manual.pdf](http://www.sandiegocounty.gov/pds/docs/Parking_Design_Manual.pdf). That manual requires newly constructed non-residential uses proposed by the Project to provide designated parking for low-emitting, fuel-efficient and carpool/vanpool vehicles at ratios specified therein. CALGreen also contains mandatory provisions for designated parking for clean air vehicles; see, e.g., California Code of Regulations, Title 24, Part 11, Section 5.106.5.2.

- *Promote ride sharing programs; e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.*

The proposed Project’s TDM strategies as set forth in mitigation measure M-GCC-1 will serve to promote ride sharing.

- *Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations).*

Project development will encourage the use of low or zero-emission vehicles through the provision of electric vehicle charging facilities in the Project’s residential and non-residential development areas. Specifically, mitigation measure M-GCC-6 requires that (i) the garage of each residential unit be pre-wired to facilitate the subsequent installation of

EV charging equipment; (ii) one Level 2 EV charging station be installed in the garage in half of all residential units; and, (iii) ten (10) Level 2 EV charging stations be located within the onsite, non-residential parking areas.

- *Provide public transit incentives, such as free or low-cost monthly transit passes.*

This strategy is not applicable to the Project site, which is not presently served by transit. The location of the site is not conducive to providing public transit incentives due to its distance to the nearest transit station and there is uncertainty as to whether public transit will be provided.

- *For the resort and commercial spaces, provide adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. For schools, recreation areas and public facilities, provide facilities that encourage bicycle commuting, including, e.g., locked bicycle storage or covered or indoor bicycle parking.*

This is required as a matter of regulatory compliance by the County of San Diego Department of Planning & Land Use's Parking Design Manual (February 2013). That manual requires newly constructed non-residential uses proposed by the Project to provide bicycle parking in accordance with the CALGreen. CALGreen's mandatory provisions for bicycle parking are set forth in the California Code of Regulations, Title 24, Part 11, Section 5.106.4.1.1 through 5.106.4.1.5. Additionally, mitigation measure M-GCC-1 requires that the Project provide bicycle racks along main travel corridors, adjacent to commercial development areas, and at public parks and open spaces.

- *Institute a telecommuter work program. Provide information, training, and incentives to encourage participation. Provide incentives for equipment purchases to allow high-quality teleconferences.*

The appropriateness of telecommuting policies is best determined by individual employers and cannot be assessed for feasibility at this time, particularly for purposes of this proposed Project as resort- and retail/commercial-based employment opportunities typically require in-person/onsite performance.

- *Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation.*

The dissemination of educational information regarding public transportation opportunities is required by mitigation measure M-GCC-1, which includes strategies to educate and inform individuals and businesses about public transportation options.

- *Consider revisions to the design of the proposed project to incorporate innovative design and program solutions to improve the mobility, efficiency, connectivity, and safety of the project transportation system. Innovative design solutions include, but are not limited to, traffic calming devices, roundabouts, traffic circles, curb extensions, separated bicycle infrastructure, pedestrian scramble intersections, high visibility pedestrian treatments and infrastructure, and traffic signal coordination. Innovative program solutions include, but are not limited to, webpages with traffic demand and traffic signal management information, car and bike share programs, active transportation campaigns, and intergenerational programs around schools to enhance safe routes to schools. Other innovative solutions include bicycle friendly business districts, electric and solar power energy transportation systems, intelligent transportation systems, semi- or full autonomous vehicles, trams, and shuttles.*

The proposed Project, as designed, includes traffic calming features to ensure mobility, efficiency, connectivity, and safety. For example, the proposed Project includes roundabouts at the intersections of Otay Lakes Road/Strada Piazza and Otay Lakes Road/Strada Ravenna. Additionally, the Project's Circulation Plan incorporates vehicular and non-vehicular modes of transportation to create an integrated system of roads, bike lanes, trails, pathways, and sidewalks.

**A-4-17** The comment requests that the EIR include a mitigation measure requiring the use of Tier 2 and Tier 3 construction equipment. As stated on page 31 of the Air Quality Impact Report (Appendix C-1), the Project will comply with the requirement to use Toxics Best Available Control Technology (Toxics-BACT). Toxics-BACT requires that the construction fleet would use a minimum of 10 percent Tier 2 or Tier 3 equipment, and trucks meet current state emission standards. The air emissions modeling that was conducted in Appendix C-1 of the DEIR utilized default assumptions regarding the construction fleet for Construction Years 1 through 11. The CalEEMod default assumptions are based on the average construction fleet within the San Diego Air Basin, and assume phase-in of newer tier engines in off-road equipment and phase-out of older equipment in accordance with the California Air Resources Board's OFFROAD2011 model. During the construction period, which was assumed to commence in 2015 and be complete in 2025, construction fleets that would be used for the Project would be composed mainly of Tier 2 and Tier 3 equipment; therefore, the Project would meet the requirement for implementation of Toxics-BACT. However, in response to this comment, the following mitigation measure has been added to the FEIR:

**M-AQ-1f** At a minimum, all off-road, diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 3 emission standards for nonroad diesel engines promulgated by the U.S. Environmental Protection Agency, if such equipment is available in the San Diego region. Construction equipment that meets the Tier 4 emission standards will be integrated into the construction fleet during the later stages of the Project's construction period (post 2020), if such equipment becomes available in the San Diego region.

The emission reduction benefits of this new mitigation measure have not been quantified, as more specific information about the construction equipment would be needed to do so; however, the measure would serve to reduce the Project's construction-related NO<sub>x</sub> emissions.

The comment also states that the construction-related analysis does not evaluate health risk impacts under a worst-case condition because it does not assume overlapping and ongoing activity. As a result, the comment opines that the Project's cumulative impacts from toxic air contaminants are unavoidably significant. As discussed on page 32 of the Air Quality Impact Report (see Appendix C-1), the health risk assessment that was conducted for the Project takes into account that construction would last for 11 years. As stated:

"Mass site grading, trenching, and asphalt paving operations typically generate the most diesel PM emissions because these activities require the most heavy-duty construction equipment. It is anticipated that the mass site grading, trenching, and asphalt paving operations for the project would require the greatest number of diesel-fueled construction equipment for the entire construction schedule and therefore would generate the maximum daily levels of diesel PM. Therefore, a health risk assessment was performed assuming the diesel PM levels associated with the construction emissions for mass site grading, trenching, and asphalt paving operations would occur for the full 11 years."

In summary, the health risk assessment is based on the assumption that the greatest number of diesel construction equipment would be in use for the entire duration of construction (11 years). This is a conservative analysis because it assumes that diesel emissions would occur at their maximum levels for the duration of construction. The analysis does not assume that activities are transient; rather, the analysis takes into account all activities occurring throughout the site during the duration of construction, including mass grading, trenching, building construction, and paving.

The comment also challenges the DEIR's conclusion that cumulative impacts from toxic air contaminants will be less than significant. However, this conclusion is supported by substantial evidence showing that the Project's contribution to this impact will not be cumulatively considerable. As discussed in the Air Quality Impact Report on pages 34 through 36 (see Appendix C-1), the health risk assessment utilized a screening approach to estimate the maximum impacts at the maximally exposed individual residential receptor. That receptor is located approximately 500 meters to the west of the site boundary. The SCREEN3 modeling analysis also makes worst-case assumptions regarding meteorology, assuming that the wind is predominantly blowing toward the receptor. While the closest residential receptor to the Project site is located to the west of the site, prevailing winds within the area are from the west making it likely that impacts are lower than predicted by the SCREEN3 modeling analysis. In addition, the analysis assumes that all of the construction activity is in a location 500 meters from the nearest residential receptor for the entire duration of construction (11 years). In reality, construction activities would move around the site and would not be centered in a location close to the nearest residential receptor for the entire duration of construction. The risk at all other receptors would be lower than predicted for the maximally exposed individual receptor. The analysis is, therefore, conservative because it is based on numerous assumptions that are designed to predict a worst-case impact.

Other projects that could be under construction at the same time as the proposed Project include the Otay Lakes Village 14 project, which is approximately 1 mile north of the Project site. The location of the maximally exposed individual receptor for the Village 14 project would be in a different location from the maximally exposed individual receptor for the proposed Project, and the combined impact would not be significant. In addition, it is unlikely that the maximum construction activities for other projects would occur simultaneously with the maximum activities at the proposed Project. As such, the conclusion that cumulative impacts from toxic air contaminants are less than significant is supported by the conservative nature of the analysis.

**A-4-18** The comment states that Section 2.2.2.2 of the DEIR does not provide information about the assumptions used to evaluate blasting operations. In response, please refer to the technical memorandum providing supplemental analysis and information regarding the Project's proposed blasting activities, which is included as Appendix C-24 of the FEIR. As discussed in that memorandum, the blasting material will consist of ammonium nitrate/fuel oil (ANFO) and/or emulsion slurry explosives; the maximum daily blast amount is approximately 48,000 pounds of explosives; and, the total number of blasting days is 114 to 125. Section 2.2.2.2 of the FEIR has been updated to refer the reader to Appendix C-24 for discussion of blasting.

**A-4-19** The comment states that the analysis of construction impacts does not look at a worst-case condition when phases are overlapping. The overlapping of construction phasing has been considered in the analysis presented in Section 2.2, Air Quality. Specifically, Note 1 in Table 2.2-4 and Table 2.2-6 of the DEIR provides additional information regarding the phasing overlap assumptions:

“Maximum ROG emissions occur during overlap of architectural coatings application, building construction, and paving for all construction years. Maximum daily emissions of other pollutants occur during overlap of grading, trenching, and building construction.”

The CalEEMod identifies the maximum daily emissions by calculating the emissions from overlapping phases. As discussed in the text, these overlapping construction phases represent the maximum emissions. The maximum emissions include emissions from construction heavy equipment, construction traffic, worker traffic, and fugitive dust.

The comment also requests that mitigation measure M-AQ-1 be supplemented with the requirement that all Project construction equipment meet the California Air Resources Board’s “most recent certification for off-road heavy-duty vehicles.” Compliance with such certification is required as a matter of law. Specifically, the California Air Resources Board’s in-use off-road diesel vehicle regulation applies to all self-propelled off-road diesel vehicles with 25 horsepower or greater are subject to the certification requirement. Because the requirement is a matter of regulatory compliance, no further mitigation is necessary.

**A-4-20** The comment states that the air quality analysis concludes that there would be no carbon monoxide “hot spot” impact at the intersection of Otay Lakes Road and Wueste Road in 2030 due to mitigation designed to improve the intersection’s LOS, and requests that the analysis also address impacts at the referenced intersection in 2025 and be revised to eliminate any reliance on the implementation of the referenced traffic mitigation because the improvements are within the City of Chula Vista’s (not County’s) jurisdiction.

In response, the County asked its Air Quality consultant to prepare a technical memorandum explaining the County’s guidelines, other modeling analyses, and the “hot spots” assessment conducted for this intersection. This memorandum addresses the City of Chula Vista’s comments and is attached as Appendix C-26 of the FEIR. As discussed therein, the Project-related traffic at Otay Lakes Road and Wueste Road in 2025 would result in a maximum 8-hour increase in carbon monoxide concentration of 0.63 parts per million (ppm) in the a.m. peak hour, and 0.77 ppm in the p.m. peak hour. When added to the maximum 8-hour concentration of carbon monoxide (1.56 ppm) measured at the Chula Vista monitoring station in 2010, the resultant concentration of 2.33 ppm would be approximately 4 times lower than the 8-hour ambient air quality standards for carbon monoxide of 9 ppm. This memorandum supports the DEIR’s conclusion that the Project’s operational “hot spots” impacts would be less than significant. It should be noted that the CO “hot spot” analysis does not rely on future improvements to the subject intersection and therefore represents a worst-case analysis of potential traffic impacts.

**A-4-21** The comment requests that Section 3.8, Global Climate Change, of the 2015 DEIR be supplemented with additional information regarding Governor Brown’s Executive Order B-30-15. In response, Section 2.10 of the 2019 Recirculation Package discussed Executive Order B-30-15, including the subsequent codification of its reduction goal via enactment of Senate Bill 32; see, e.g., pages 2.10-7 through 2.10-8. Accordingly, the request in this comment has been addressed.

**A-4-22** The comment criticizes Section 3.8, Global Climate Change, of the Draft 2015 EIR for failing to disclose the litigation concerning the County of San Diego’s invalidated Climate Action Plan. At the time when the 2015 DEIR was circulated, the County had not adopted a new Climate Action Plan and did not have a legally applicable Climate Action Plan in place, and litigation was not

ongoing and pending unlike the commenter’s examples. Therefore, no discussion of the previously adopted Climate Action Plan was provided in the 2015 DEIR

As of this writing, litigation over the County’s 2018 Climate Action Plan is ongoing, and on appeal from a Superior Court order directing the County to set aside its adoption of the Climate Action Plan. Therefore, due to its uncertain status, discussion of the County’s Climate Action Plan is not necessary or appropriate. Nevertheless, the 2019 Recirculation Package (see pages 2.10-14 and 2.10-15) includes an explanation of the County’s Climate Action Plan and the current status of litigation, and summarizes consistency with the Climate Action Plan. While the proposed Project is consistent with the growth projections and land use inputs for the most recent Climate Action Plan, the proposed Project implements its own measures and, accordingly, does not use, rely on, or tier from the Climate Action Plan.

**A-4-23** The comment asks whether Executive Order B-30-15 was considered in Section 3.8, Global Climate Change, of the 2015 DEIR when evaluating the Project’s potential to conflict with policies adopted for the purpose of reducing GHG emissions in accordance with Appendix G of the State CEQA Guidelines. Please see Response to Comment A-21; as discussed therein, the 2030 emissions reduction target has been disclosed in the regulatory setting and considered in the impact analysis presented in Section 2.10 of the 2019 Recirculation Package.

**A-4-24** The comment asks whether the EIR considered the GHG emissions associated with the energy required to convey potable water to the Project site. In response, Section 2.10 of the 2019 Recirculation Package considered energy use associated with water consumption, and the resulting emissions are disclosed in Table 2.10-4 (Summary of Annual Project GHG Emissions).

As relatedly explained in Appendix C-2 of the 2019 Recirculation Package), “Water use and energy use are often closely linked. The provision of potable water to commercial users consumes large amounts of energy associated with five stages: source and conveyance, treatment, distribution, end use, and wastewater treatment.” The CalEEMod, which was used to estimate the Project’s GHG emissions accounts for the embodied energy of potable water by applying an electricity intensity factor to account for GHG emissions attributable to (1) supply and convey the water from the source, (2) treat the water to usable standards, and (3) distribute the water to individual users.

**A-4-25:** The comment requests clarification regarding the specific EDCs quantitatively factored into the Project’s GHG emissions inventory, and inquires whether the Environmental Design Considerations will be enforced as conditions of approval of the proposed Project. In response, the EDCs that were quantitatively factored into the analysis, and the GHG emission reductions attributable to those features, are discussed in Table 2.10-3 (Environmental Design Considerations to Reduce GHG Emissions) located in Section 2.10 of the 2019 Recirculation Package. The term “Environmental Design Considerations” or “EDCs” is now used in lieu of the term “PDFs” to increase the use of internally consistent verbiage within the EIR. The EDCs will be required as a condition of approval and included in the CEQA-mandated MMRP that will be prepared for the Project.

As shown in Table 2.10-3, the two following EDCs were quantitatively factored into the analysis (see Table 2.10-3 for further details on each EDC):

- The Project’s residences would only utilize natural gas fireplaces; no wood burning fireplaces would be installed.

- Indoor residential plumbing products will comply with the 2013 CALGreen Code, including future updates to CALGreen as these updates apply to homes in the Project built under the updated code.
- The Project includes a Water Conservation Plan that will reduce outdoor water usage by 30 percent, when compared to existing outdoor water usage for typical residential homes.

**A-4-26** The comment states that the GHG emissions analysis presented in Section 3.8, Global Climate Change, of the 2015 DEIR unreasonably assumed a 30 percent reduction in outdoor water usage because there is no evidence that the Project’s Water Conservation Plan will achieve that reduction. In response, Appendix VI, Water Conservation Plan, of the Project’s Specific Plan contains an unambiguous commitment to achieving a minimum 30 percent reduction in outdoor water use for single-family residential lots. County approval of the proposed Project would include adoption of the Specific Plan and mandate compliance with the reduction requirement. Table 2.10-3 (Environmental Design Considerations to Reduce GHG Emissions) in Section 2.10 of the 2019 Recirculation Package also specifies that the 30 percent reduction is assumed in the analysis and, accordingly, must be implemented.

This commitment to reduce outdoor water use by a minimum 30 percent would also be enforced through the County permit process and conditions of approval. Under the County of San Diego’s Landscape Ordinance, each residential lot is required to obtain an Outdoor Water Use Authorization, which sets an annual water budget. To obtain this authorization, the lot must have a Landscape Documentation Package (LDP) prepared and approved before issuance of the building permit. The County will require as a condition of approval of the Project, that the developer shall ensure the LDP achieves a minimum reduction of 30 percent for which the landscaping and irrigation system must be installed and certified by the County prior to occupancy. As such, the GHG emissions analysis reasonably and appropriately used a 30 percent reduction in outdoor water usage attributable to the single-family residential lots.

**A-4-27** The comment states that the GHG emissions analysis presented in Section 3.8, Global Climate Change, of the 2015 DEIR cannot reasonably assume a 30 percent reduction in overall electricity usage attributable to solar panel installation because the analysis does not indicate (i) where solar panels will be installed, (ii) how many panels need to be installed to achieve the identified reduction, (iii) whether the achievement of this reduction will be required as a condition of approval, or (iv) how achievement of this reduction will be ensured. In response, Section 2.10 of the 2019 Recirculation Package contains mitigation parameters that supersede the solar panel provision set forth in the 2015 DEIR. More specifically, mitigation measure M-GCC-4 sets forth a requirement for single-family residential development within the Project site to achieve Zero Net Energy design, as defined by the California Energy Commission. Appendix C within Appendix C-2 of the 2019 Recirculation Package contains a “Building Analysis” prepared for the Project by ConSol. As provided therein, and as demonstrated through the application of recognized building modeling software, Zero Net Energy design is anticipated to be achieved through a combination of improvements to the building envelope design and efficiency, *and* installation of rooftop solar. The Zero Net Energy design requirement would be made enforceable via adoption of the CEQA-mandated MMRP, in the event of Project approval, and would be implemented via Zero Net Energy Confirmation Reports prepared by qualified building energy efficiency and design consultants that would be submitted to the County for review and approval.

**A-4-28** The comment requests additional information regarding the differences between Methodology 1: Comparison of Project Emissions to the Existing Condition and Methodology 2: County’s 2015 GHG Guidance – 16 Percent Reduction Target in the 2015 DEIR. This comment does not apply

to the analysis presented in Section 2.10 of the 2019 Recirculation Package, which does not utilize the same methodologies relied upon in the 2015 DEIR.

**A-4-29** The comment questions how the Project can be found consistent with the County’s General Plan, under Methodology 5: County of San Diego General Plan in Section 3.8, Global Climate Change, of the 2015 DEIR, if the County has not yet adopted an adequate Climate Action Plan. Please see Response to Comment D-22 regarding litigation arising from the County’s 2018 Climate Action Plan. Additionally, the 2015 DEIR and superseding Section 2.10 of the 2019 Recirculation Package (see pages 2.10-23 through 2.10-24) appropriately consider the Project’s consistency with the applicable goals of the General Plan intended to reduce GHG emissions and further consider the Project’s consistency with the General Plan’s land use plan.

The Climate Action Plan is a separate County planning document envisioned in General Plan Policy COS-20.1. Individual projects do not implement Policy 20.1, which envisions a Climate Action Plan to be prepared by the County. Nevertheless, the proposed Project is consistent with the General Plan and the most recent 2018 Climate Action Plan, even though it does not rely upon the effectiveness of the Climate Action Plan. Whether or not the County has yet implemented Policy COS-20.1, the proposed Project is consistent with applicable County plans. Further, litigation over the most recent Climate Action Plan related primarily to a mitigation measure in the EIR for the Climate Action Plan, which does not affect the Project. The proposed Project independently ensures consistency with State emissions goals and the County’s General Plan. (See also Appendix E-1, General Plan Amendment Report, of the 2019 Recirculation Package.).

**A-4-30** The comment states that Section 3.8, Global Climate Change, of the 2015 DEIR does not identify any specific PDFs or mitigation measures that are intended to reduce the Project’s GHG emissions. Section 2.10 of the 2019 Recirculation Package supersedes Section 3.8 of the 2015 DEIR. And, Section 2.10 identifies several EDCs specific to the Project (see specifically Table 2.10-3), as well as eight (8) mitigation measures (see M-GCC-1 through M-GCC-8) designed to ensure that the Project results in no net increase in GHG emissions.

**A-4-31** The comment questions the reliance on water consumption and electricity reductions attributable to the Project’s Water Conservation Plan and solar panel commitment in Section 3.8, Global Climate Change, of the 2015 DEIR. This is the same comment responded to above in Response to Comments A-4-26 and A-4-27; please see those responses for relevant information and note that relevant revisions were made in Section 2.10 of the 2019 Recirculation Package.

**A-4-32** The comment states that the discussion of the Project’s potential cumulative impacts attributable to GHG emissions is deficient in Section 3.8, Global Climate Change, in the 2015 DEIR. In response, please see Subsection 2.10.3 (Cumulative Impact Analysis) in Section 2.10 (Global Climate Change) of the 2019 Recirculation Package. GHG impacts are, by their very nature, global and cumulative. Indeed, in the context of CEQA, agencies and organizations with expertise in the subject matter have found that “GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.”<sup>2</sup> Similarly, on

<sup>2</sup> CAPCOA, CEQA & Climate Change, p. 35, January 2008. See also Sacramento Metropolitan Air Quality Management District, CEQA Guide, p. 6-1, November 2014 [the Sacramento Metropolitan Air Quality Management District (SMAQMD) has concluded that “from the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative”]; San Joaquin Valley Air Pollution Control District, Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA, p. 4,



page 17 of their *Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97* (December 2009), the California Natural Resources Agency observed that “[d]ue to the global nature of GHG emissions and their potential effects, GHG emissions will typically be addressed in a cumulative impacts analysis.” Because GHG emissions are cumulative by nature and have created a *global* environmental condition, an analysis of the Project’s GHG emissions impacts, including consistency with state targets and other applicable plans, is also a cumulative analysis by nature. It is not a possible or informative method to provide a traditional listing of cumulative projects and estimation of their emissions contribution for this impact category as requested by the comment.

**A-4-33** The comment states that the significance conclusions presented in Section 3.8, Global Climate Change, of the 2015 DEIR are defective because the Project’s Water Conservation Plan and solar panel commitment have not been formulated and are not enforceable. This is the same comment addressed above in Responses to Comments A-4-26 and A-4-27; please see those responses for relevant information.

The comment also states that there are no enforceable provisions relating to vehicle miles traveled (VMT) reductions or increased public transit opportunities. Please see Response to Comment D-16 regarding the TDM strategies included as mitigation (specifically mitigation measure M-GCC-1) in Section 2.10 of the 2019 Recirculation Package. The proposed Project is not subject to requirements to reduce VMT as neither the County or State have adopted CEQA Significance thresholds or other policies related specifically to VMT reduction. Subsequent to public review of the 2015 Draft EIR and the 2019 Recirculated EIR, a VMT analysis was prepared for informational purposes which is included in Final EIR Appendix X. .

**A-4-34** The comment states that Section 3.8, Global Climate Change, of the 2015 DEIR utilizes a build-out year (2025) that is inconsistent with the build-out year (2030) presented in Section 2.9, Transportation and Traffic, of the 2015 DEIR and, as a result, may have underestimated GHG emissions. This comment is no longer applicable, as Section 2.10, Global Climate Change, of the 2019 Recirculation Package (see, e.g., page 2.10-21) is aligned with the transportation analysis and states “The emissions inventory modeling estimated the Project’s operational emissions in its build-out year (2030).”

**A-4-35** The comment requests additional information regarding the incorporation of emission reductions attributable to regulatory standards in the analysis provided under Methodology 2: County’s 2015 GHG Guidance – 16 Percent Reduction Target in Section 3.8, Global Climate Change, of the 2015 DEIR. In response, please see Section 2.10.2, Regulatory Compliance Measures and Environmental Design Considerations of the 2019 Recirculation Package, which identifies those regulatory compliance measures with quantifiable reduction benefits reflected in the Project’s emissions inventory. Compliance with adopted and approved regulatory standards is established as a matter of law and is overseen by relevant agencies, such as the California Air Resources Board, California Energy Commission, and California Public Utilities Commission. Incorporation of such standards into emissions modeling is consistent with the state CEQA practice.

**A-4-36** The comment notes that Methodology 6: SANDAG’s 2050 Regional Transportation Plan and Sustainable Communities Strategy in Section 3.8, Global Climate Change, of the 2015 DEIR

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December 17, 2009 [the San Joaquin Valley Air Pollution Control District (SJVAPCD) has concluded that the “effects of project specific GHG emissions are cumulative”].

considers the Project's residential trips (19,266 average daily trips [ADT]) and asks why total Project-wide trips (27,191 ADT), including those relating to non-residential uses, were not considered. As to the 2015 DEIR, the analysis focused on a comparison of the residential ADT proposed by the Project and anticipated by SANDAG's Series 12 Year 2050 Regional Model. As discussed in Section 3.8, the SANDAG model anticipated 18,922 residential ADT on the Project site, just 344 less residential ADT than proposed by the Project. The Project's inclusion of some non-residential, onsite uses serves to reduce the trip lengths that Project residents would otherwise need to travel to meet their everyday needs, which is consistent with the underlying policy object of SB 375 and SANDAG's regional plan to encourage smartly designed, self-serving communities.

Section 2.10, Global Climate Change, of the 2019 Recirculation Package no longer focuses on a bright-line comparison of ADT projections to assess consistency with SANDAG's RTP/SCS. Instead, as explained in Section 2.10 (see page 2.10-25), the Project is "part of a larger master-planned community that is an element of the region's planned forecast for accommodating anticipated population growth." Because the Project is consistent with regional land use expectations and growth assumptions, it would not conflict with SANDAG's implementation of the RTP/SCS, which is built upon the foundation of existing General Plan land use designations, or SANDAG's attainment of the SB 375 reduction targets.

**A-4-37** The County disagrees that the age of the General Development Plan (GDP) and Resource Management Plan (RMP) might lead to inefficient use of resources. Once conveyance occurs and the Preserve Owner/Manager (POM) takes on the management of the Preserve areas, the area will include recent survey information on biological resources. In addition, the POM must continue to conduct current studies on a regularly scheduled basis so that the management tasks assigned for each year are based on the current and site-specific conditions. The ***GDP/SRP adopted by each entity (the City of Chula Vista and the County)*** could be modified to reflect current development proposals, such as Village 13, which will be amending the GDP/SRP, MSCP, and other plans. The requirements and guidelines within the RMP structure may also be amended to reflect not only the current conveyance acreages, but the methodology of restoration and preservation activity required and the overall POM operations and maintenance. A comprehensive Resource Management Plan Phase 2 (RMP2) update was approved to make the City of Chula Vista's and the County of San Diego's documents current, account for Preserve Lands, and identify POM activities and long-term funding mechanism for County projects.

With regard to the adequacy of mitigation for impacts, full analysis of impacts has been conducted and mitigation is included for significant impacts, including the conveyance as defined by the Otay Ranch RMP. The discussion of Wolf Canyon and revisions within the City of Chula Vista does not apply to the proposed Project and this statement does not present any issues or make any substantive comment about the adequacy of the DEIR.

**A-4-38** RMP Policy 6.6(1) states that infrastructure facilities should be sited and designed to minimize visual and other impacts to Preserve resources. The DEIR analyzed the facilities proposed within the Otay Ranch Preserve to ensure that they were sited to minimize impacts to MSCP Covered Species and habitats by avoiding wetlands and special-status species. The applicant has worked with the Wildlife Agencies to design culverts that provide for wildlife movement under Otay Lakes Road. In addition, the other facilities sited within the proposed Preserve, which include three detention basins and one water tank, create minimal impacts on resources by reducing the width of access roads and reducing the footprint of facilities as much as feasible. This resulted in minimized impacts to special-status species and sensitive habitat, and no wetland impacts. By siting the tank at the top of the hill, the minimal amount of grading is proposed.

**A-4-39** The discussion in DEIR Section 2.3.2.1 is specific to Off-Site Otay Ranch Lands. The full text of the EIR states “Because the impacts to off-site Otay Ranch lands are associated with road improvements as required by the County of San Diego, conveyance per the Otay Ranch RMP is not required, and no mitigation is required.” The DEIR acknowledges impacts to wetland resources would require mitigation that will be implemented by the processing and approval of a Site Development Permit by the City of San Diego (a responsible agency under CEQA) for impacts to environmentally sensitive lands. The comment regarding allocations for certain arterial roadways does not apply to Village 13 as Otay Lakes Road is an existing facility. In addition, the RMP2 forecasts common use acreage in aggregate for Village 13 rather than by specific use (such as roads or schools). Please see Response to Comment A-4-43 for a discussion of forecast and actual conveyance land for Village 13.

**A-4-40** The County disagrees with the commenter that the DEIR has not demonstrated how trail and utility roads will be managed to prevent access into the Preserve. The trails, which are not located within the Preserve, will be fenced to prevent access into the Preserve and the utility road will be gated to prevent use. Additionally a Preserve Edge Plan (Appendix C-23 of the EIR) has been prepared in order to address indirect effects of development on Preserve Lands. Note, however, that any illegal or unauthorized entry into the Preserve is a law enforcement issue, not an impact of the Project.

**A-4-41** See Global Response 2: Golden Eagle and Response to Comment A-1-17.

**A-4-42** The County agrees with the commenter that the onsite Preserve Lands are based on parcel ownership, and that the Otay Ranch Preserve is not a consortium of preserves that are attached to specific Villages, but is a ranch-wide feature assembled through conveyance activities from the City of Chula Vista and ultimately the County. At the time Village 13 is developed, habitat within the overall preserve will be conveyed to satisfy the requirements of Village 13.

As noted in Section 5.1.7 of the Biological Resources Technical Report, the proposed Project’s total conveyance requirement under the RMP is 887 acres. As indicated above, however, the Project’s impacts on QCB require 966 acres of habitat preservation, which includes the 887 acres otherwise required under the RMP. The proposed preserve for Village 13 actually totals 1,089 acres,— approximately 123 acres over the minimum required. Thus, there is an additional 123 acres within the preserve that may be used by other Otay Ranch projects to meet their respective conveyance obligations. If acquired by other Otay Ranch projects, list acreage would not be developed but conveyed to the POM to meet their conveyance requirement.

**A-4-43** The comment identifies differences between the existing RMP2 forecast and conveyance and the actual acres of various designations of land of the proposed Project. These differences result from a redesign of the original project footprint to be more environmentally sensitive, including the relocation of the elementary school to Village 13 and the acquisition of 10 off-site acres to be added to the Preserve. As stated on page P-1 of the Resource Management Plan, “The RMP is intended to be implemented as part of the overall integrated planning approach for Otay Ranch.” This makes the RMP different from the County Resource Protection Ordinance, which is implemented on an individual, parcel by parcel basis. Therefore, the RMP conveyance projections are not applied on a parcel-by-parcel or village by village basis. As stated in the Otay Ranch RMP2 (page 62) regarding Exhibit 9 and the forecast by village, “it should be emphasized that as SPA plans are processed, the actual conveyance obligation may vary slightly from the forecast reference above due to more precise planning and engineering.” When adjusted for the relocation of the 10-acre elementary school common use area, the conveyance forecast for the

proposed Project is approximately 1.7 percent different (16 acres) from the original forecast. The RMP2 provides for the City and County to modify the Conveyance Plan to adjust for variances to the forecast. As a condition of development, a comprehensive update to RMP2 shall be approved prior or concurrent with the Village 13 Board of Supervisors processing. This update includes a revised conveyance forecast and the use of the Non-Otay Ranch Project Mitigation Lands Program to offset any discrepancy in the acquisition of preserve lands.

**A-4-44** The comment questions whether land required to mitigate impacts on the QCB can also be used to satisfy the conveyance requirements for development within Otay Ranch. The County disagrees that mitigation land cannot be used to satisfy mitigation requirements both for the RMP and for impacts to QCB under CEQA. The Otay Ranch RMP establishes the Otay Ranch Preserve and further defines how open space is to be conserved and managed for biological resource value. Its implementation constitutes CEQA mitigation for biological impacts associated with development. The Otay Ranch RMP, on the other hand, establishes the mechanism for mitigation of overall impacts related to Otay Ranch and provides for conservation and management of the entire 11,375-acre Preserve. Conveyance is provided at a 1.188:1 ratio, whereas the mitigation proposed for the QCB is at a 2:1 ratio. There is adequate and suitable mitigation land within the areas designated as Preserve within Village 13, and the applicants have agreed to convey the Preserve lands within Village 13 rather than other lands within the Otay Ranch. Thus, conveyance provides the mitigation for the impacts to biological resources. This is currently the operating procedure for conveyance and Preserve land within the City of Chula Vista.

Please See Response to Comment A-4-42 for further discussion of conveyance land.

**A-4-45** The County agrees with the commenter and has revised page 3.3-21 of the EIR to include a footnote that states, "It should be noted, without an amendment to the GDP, development potential still exists within these properties." Page 67 of the Biological Resources Technical Report has also been revised with the same footnote.

**A-4-46** The County disagrees that analysis for the proposed Boundary Adjustment should be based on survey data collected within 1 year. Surveys for the proposed Project have taken place over a multitude of years providing a thorough and longitudinal depiction of resources within the Project area.

**A-4-47** The County agrees that impact analysis should include setback requirements per the Otay Ranch RMP and GDP Program EIR. A Preserve Edge Plan has been prepared and incorporates the setback requirements and complies with the requirements of the Otay Ranch RMP. Thus the proposed Project, as designed with the Boundary Adjustment, includes the setbacks as required by the RMP.

**A-4-48** The 10-acre offsite parcel will be added to the current MSCP Preserve to balance acreage lost through the MSCP Boundary Adjustment. The Functional Equivalency includes this parcel in the analysis and graphics. The 10-acre parcel (also known as the Marlin Parcel) is currently designated for development. All development potential of this parcel will be removed with its incorporation into the MSCP. The GDP/SRP amendments will be a condition of approval and the future discretionary action will be added to Table 1.0-2 – Future Discretionary Approvals and Permits of the FEIR. Conditions of approval will be included in the CEQA Findings of Fact for the Project, which will be provided with the FEIR.

- A-4-49** Section 4 of the Biological Resources Technical Report, MSCP Preserve Boundary Adjustment and Functional Equivalency Analysis, describes in detail how the redesigned Preserve boundary improves conservation of covered species. While there may be an overall decrease in the amount of acreage within the Preserve, the proposed boundary line adjustment results in less than a 2 percent difference between the existing MSCP Preserve and the proposed Preserve. With the Boundary Adjustment, habitats that are rarer (e.g., valley needlegrass grassland and vernal pool) are increased in the Preserve. The increase in dCSS and dVGL acreage, for example, enhances the biological value and function of the preserve because such areas are occupied by sensitive resources such as vernal pools. Additional costs of management are not necessarily associated with the presence of these habitats because they contribute other features that are important for the preserve.
- A-4-50** The County does not agree that the report needs to further substantiate the need for rip-rap within the corridors presented in Figures 16 and 18. The culverts have been designed specifically to convey wildlife within the Project site, under Otay Lakes Road. The culverts shown in Figures 16 and 18 contain rip-rap to reduce impacts from scour and erosion and to ensure the stability of the 6-foot-wide soft-surface wildlife path. There is no evidence provided that the rip-rap will impede or discourage wildlife movement within the proposed culverts.
- A-4-51** The County does not agree that additional explanation is needed to substantiate how the proposed design is adequate for the safe passage of wildlife. As described in Section 4.3 of the Biological Resources Technical Report, the design of the wildlife culverts has been developed to be consistent with the MSCP Subarea Plan and also to be consistent with the scientific literature to the maximum extent feasible (Foster and Humphrey 1995). The wildlife culverts were designed in coordination with the Wildlife Agencies as well. Areas that are graded adjacent to the culverts will be restored with native habitat, which will provide a habitat buffer for QCB and other wildlife species as discussed in the Functional Equivalency. The wildlife culverts are all designed to have fencing to funnel wildlife movement, to have a natural bottom with native vegetation at either end, and to be of size and height of opening so there is direct line of sight from one end to the other. Because there is natural light within the culverts, low-level illumination is not included.
- A-4-52** The County does not agree that Section 4.5 of the Biological Resources Technical Report, Effect on Ecotones or Other Conditions Affecting Species Diversity, should be revised to demonstrate how the proposed Boundary Adjustment maintains topographic and structural diversity and habitat interfaces of the Preserve. As discussed in Section 4.5, the modified Preserve design results in a Preserve with similar topographic and structural diversity as the existing MSCP Preserve and that finding is included in the Functional Equivalency Analysis, which is attached to the Biological Resources Technical Report. The Biological Resources Technical Report is included as Appendix C-3 of the FEIR.
- A-4-53** Section 4 of the Biological Resources Technical Report has been revised to indicate that the proposed Boundary Adjustment would **not** increase the likelihood that an uncovered species will meet the criteria for listing under the federal or state Endangered Species Acts. As noted in Table 10 of the Biological Resources Technical Report (Section 4), there is minimal loss of non-covered and non-listed species with an overall robust remaining population of the species within the 1,099 acres of preserve. Thus, the analysis of special-status species, in conjunction with review of the Wildlife Agencies, has concluded that the proposed boundary adjustment will not increase the likelihood that a non-covered species will meet the criteria for listing under either the federal or state Endangered Species Acts.

- A-4-54** The energy required to transport, treat, and deliver water and wastewater is embedded in the energy analysis and included in the calculation of energy consumption for calculating greenhouse gas emissions (see Section 2.10, Global Climate Change, of the 2019 Recirculation Package, as well as Response to Comment A-4-24). Analysis in Section 3.8 is not broken down into individual Project components, rather it looks at energy consumption over the whole Project and whether non-renewable resources will be used inefficiently.
- A-4-55** The County disagrees with the comment that the mitigation measure improperly defers the significance determination to the consultant. The County will consult the professional opinion of the geotechnical engineer to ensure the design of the Project reduces to less than significant the potential for rock fall hazards. It must be noted that the presence of rock fall hazards on a project does not preclude development. A geotechnical engineer will determine whether the rock outcrops are well seated or attached to the underlying rock mass. Specific mitigation measures for each hazard will be determined at the final grading phase. The expert's opinion remains subject to the County's review and concurrence. As stated in the DEIR, the Project will conform to all recommendations and requirements included in Geotechnical Reports (Appendices C-6, C-7, and C-8) to implement the mitigation measures identified to reduce impacts to below a level of significance.
- A-4-56** The PEIR mitigation measures were not incorporated because only one potential impact to hazards was identified in the DEIR: a potential for human exposure to health vectors. Specific mitigation was identified in the DEIR to reduce impacts to a less than significant level. No changes have been made to the EIR.
- A-4-57** The County does not concur with this comment. The California Education Code and requirements of the California Department of Toxic Substances Control are existing regulations that must be complied with by the school districts in Chula Vista when the district identifies a site for a potential school. Actual construction of the school is a school district project for which the district would be both the applicant and the lead agency. School districts in the state of California are required to conduct environmental review on potential school sites prior to their selection, which includes health and safety considerations. Therefore, these regulations do not need to be adapted into mitigation measures for this EIR, and the EIR does not improperly defer the formation of mitigation.
- A-4-58** The County does not concur with this comment. Potential safety hazards to people within the Project area were analyzed in Section 2.6.2.3 of this EIR. CEQA Guidelines and Appendix G do not require analyzing a change in air traffic patterns or levels for airports. The language from the County Guidelines for Determining Significance of Airport Hazards is noted. Due to these reasons, no changes were made to the EIR.
- A-4-59** The County disagrees that the required 100 feet of defensible space analyzed for the Project needs to be evaluated at 150 feet wide. The SDCFA enforces a defensible space standard that has been codified at the state level (PRC 4290-4291) and adopted throughout most fire jurisdictions in California. This standard is applied by most of the San Diego County fire agencies, including those with fire environments that produce more aggressive wildfires than those produced within wildland areas surrounding the Project. A total of 100 feet has been shown effective at protecting the ignition-resistant structures built to the latest codes and is sufficient for this Project. Cohen's (1998) studies indicate that approximately 30 to 50 feet was successful most of the time for avoiding ignitions of exposed wood. These structures will include highly ignition-resistant exterior walls, doors, and windows and will be provided 100 feet of setback from offsite fuels. There is no science-based analysis that indicates that 150 feet provides better protection of new,

ignition-resistant structures than 100 feet. Further, the entire community will include conversion of wildland fuels to managed landscapes with low flammability and will act as a large fuel break. It is not clear in the comment how CVFD's analysis resulted in their conclusion that the provided defensible space will impact their ability to provide services. However, based on the provided facts, no additional response is necessary.

**A-4-60** The Fire Protection Plan analyzes the Project based on its location within the jurisdiction of the SDCFA. Therefore, the County disagrees that there is a need to analyze the Project with fire service from Chula Vista. The Chula Vista Fire Department's closest station, Station 8, is approximately 1.5 miles from the Project's entrance. At modeled response speeds using the Insurance Service Office (ISO) formula, Station 8 can respond to roughly 60 percent of the Project within the 5-minute travel time standard. This does not meet the San Diego County General Plan 5-minute response time standard, which is measured to the most remote structure in a project. The proposed Project will be financially capable of and responsible for building a fire station onsite as required by the fire services agreement. The station must be located for an apparatus responding from the closest fire station that is legally obligated to respond, to the most remote parcel in a project site, as well as providing ongoing operations and maintenance funding through property tax revenues and/or a fire service agreement. The potential impacts associated with construction of a fire station onsite have been evaluated as part of the EIR and determined to be mitigated to below levels of significance for environmental effects.

**A-4-61** While the County acknowledges that the SWMP report was prepared per the 2007 permit rather than the 2013 permit, the County does not concur that water quality was not adequately addressed. At the time the analysis was written, SUSMPs for both the City of Chula Vista and San Diego County had not been updated to the 2013 permit; therefore, the report was prepared per the 2007 permit. However, sizing of water quality basins accounted for volume requirements based on the 2013 permit. Per Step 7, page 32 of the SWMP, Appendix C-14 of the DEIR for Village 13: "The bioretention basins proposed for water quality treatment have been sized to treat the water quality flows based in accordance with the California Regional Water Quality Control Board Order R9-2007-0001. In preparation for the anticipated Order R9-2013-0001, additional retention capacity has been included in the preliminary design of each bioretention basin based on the site's infeasibility to infiltrate and 1.5 times the design capture volume." It should be noted that an updated SWQMP was prepared for the new Alternative H (Appendix D-14 of the FEIR) in compliance with the California Regional Water Quality Control Board San Diego Region Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100.

**A-4-62** See Response to Comment A-4-61. Additionally, Appendix C-13 of the EIR includes discussion of the 85<sup>th</sup> percentile storm event regarding water quality.

**A-4-63** The reference to seepage in the Geotechnical Investigation Report is a general observation by the geotechnical consultant, not a conclusion from the analysis. The geotechnical analysis included 136 onsite borings and trenches, and no natural seepage conditions were observed. Therefore, seepage conditions are either non-existent or de minimis compared to the impacts from surface runoff. In addition, should areas of seepage be identified during the grading and construction phase of the Project, the DEIR includes best management practices (BMPs) to install sub-drains to capture, control, treat, and discharge the runoff. Further, the proposed Project would comply with the Otay River Water Management Plan, as discussed in Section 3.2.1.3 and Section 3.3.1.2 of the EIR to protect water quality.

**A-4-64** The County concurs that storm water systems must be maintained in perpetuity and this issue has been addressed throughout the SWMP, Appendix C-14 of the DEIR.

Attachment F of the SWMP provides a maintenance program of all the treatment control facilities, including the Filterra units, proposed within Otay Lakes Road. The maintenance program for the bioretention basins and roadside bioretention areas are consistent with maintenance activities listed for bioretention facilities in the CASQA (TC-32) BMP Handbook for New Development. The program in Attachment F is general as the bioretention areas/basins are non-proprietary facilities. Regarding responsibility, per Step 8, page 41 of the SWMP Appendix C-14 of the DEIR: “Funding will be the responsibility of the developer(s) until the project is completed. At that time, funding for all water quality treatment BMPs within the public right-of-way is provided by the Homeowners Association for the Otay Ranch Resort Village development. The HOA will be responsible to perform the maintenance activities and ensure adequate funding in perpetuity.

Additionally, the applicant will enter into a BMP Maintenance Agreement with Easement with the County of San Diego that will accomplish three objectives: (1) the easement will be dedicated on the final map; (2) the agreement will commit the land to being used only for purposes of the BMP; and, (3) the agreement will include an obligation be the landowner to maintain the facilities in accordance with this Storm Water Management Plan (which would be passed on to future purchasers or successors of the landowner as a covenant). The final map will include an easement giving the County the right to enter onto the land for access to inspect the BMPs.”

**A-4-65** The SWMP was updated in September 2014 per the cover of the report. The County-provided template for the report includes the “August 2012” footer as a means of verifying that the user is using the latest version. See Response to Comment A-4-62.

**A-4-66** The County concurs with the last statement of the comment, that “the 85th percentile for these “mixed flows” should be based on the volume of the combined areas.” The County confirms that Village 13 basin sizing is representative of the area and flows contributing to it. The calculations and exhibits within the SWMP, Appendix C-14 (Attachment D, page 45) define the developed areas draining to each BMP for this site as well as areas that are self-treating and bypass the onsite BMPs.

Per Step 7, page 32 of the SWMP, Appendix C-14 of the DEIR for Village 13:

“The bioretention basins proposed for water quality treatment have been sized to treat the water quality flows based in accordance with the California Regional Water Quality Control Board Order R9-2007-0001. In preparation for the anticipated Order R9-2013-0001, additional retention capacity has been included in the preliminary design of each bioretention basin based on the site’s infeasibility to infiltrate and 1.5 times the design capture volume.”

Within the SWMP (Appendix C-14 of the DEIR), Step 2, page 7 and Step 7, page 36 discuss the proposed water quality basin sizing. Additionally, please see the BMP Location Exhibit in Attachment C, on page 45 of the SWMP for specific locations of basins and drainage areas.

**A-4-67** The County concurs with the comment and revisions have been made throughout the PFFP report. The word “swale” has been replaced with the word “area” throughout the document as swales require residence time and are not considered high-efficiency BMPs. Bioretention areas will have flat bottoms and engineered soil layers per Step 7, page 33 of the SWMP, Appendix C-14 of the DEIR.



- A-4-68** The comment does not identify any deficiency in the DEIR but instead focuses on a document that does not relate to the County's CEQA analysis. For that reason, the County provides no further response to this comment. See Responses to Comments A-1-25 and A-4-80 for a description of the Baldwin Letter.
- A-4-69** The Baldwin Letter identifies approximately 135 acres, which was eliminated from development and designated part of the MSCP Preserve. Section 3.3.1.2 of the FEIR has been updated to include a reference to discussion in Section 1.2.2.2 of amendments associated with the Project. Section 1.2.2.2 of the FEIR has been updated to include a discussion of the original development footprint and the amendments necessary to implement the reduction in acreage discussed in the Baldwin Letter. This removal of development potential in Village 13 occurred with the Board of Supervisors decision in 2001.
- A-4-70** The County disagrees that the DEIR provides an inadequate discussion regarding the Chula Vista MSCP and proposed open space. The comment, however, does not identify any specific deficiency in the DEIR's analysis. For that reason, the County provides no further response to this comment.
- A-4-71** See Responses to Comments A-1-27, A-3-45, A-4-37, and A-4-48 for further discussion of the Otay SRP.
- As this comment relates to the policy discussion of the Otay SRP Map Amendment and does not raise any new issue or make any new substantive comment concerning the adequacy of the DEIR, the County provides no further response to this comment.
- A-4-72** The reasons for the SRP Amendment eliminating the 500-foot buffer are beyond the scope of this Project and EIR. Therefore, the County provides no further response to this comment.
- A-4-73** The DEIR analyzes public facilities and services for the proposed Project, on a direct and cumulative basis. The EIR concluded that the Project's impacts on schools and fire service would be less than significant. This comment relates to the policy discussion and rationale for the relocation of the school and elementary school and does not raise any new issue or make any substantive comment concerning the adequacy of the DEIR; for that reason, the County provides no further response to this comment.
- A-4-74** The DEIR analyzes the Project's impact on open space and consistency with the RMP and MSCP, concluding the Project's impacts would be less than significant. As this comment relates to potential additional open space associated with other projects, the County provides no further response.
- A-4-75** There is currently no agreement for the Project to contract for City of Chula Vista services. At such time that the City of Chula Vista and County agree that services shall be contracted out to the City of Chula Vista, an out of area service agreement or other such instrument would be prepared to ensure an adequate LOS and funding is provided to the City of Chula Vista. The comment does not raise any new issue or make any new substantive comment concerning the adequacy of the DEIR as it relates to Service Revenue, the PFFP and the Fiscal Impact Analysis; for that reason, the County provides no further response to this comment.
- A-4-76** The County disagrees that the provision of sewer service through the Salt Creek Interceptor was not adequately analyzed. The DEIR includes a thorough discussion of this project design feature in Section 3.7.2. Subsequent to the end of public review for the DEIR, the City of Chula Vista

has agreed to provide sewer transportation service through the Salt Creek Interceptor. This can be accomplished through an out of area service agreement that does not require annexation to the City of Chula Vista. The comment does not raise any new issue or make any new substantive comment concerning the adequacy of the DEIR as it relates to sewer service; for that reason, the County provides no further response to this comment.

**A-4-77** The County disagrees that the DEIR must analyze the full range of City of Chula Vista services and the annexation to the City of Chula Vista as a project alternative. The Spring Valley Sewer Interceptor Alternative was considered but rejected from further analysis. The Spring Valley Sewer Interceptor Alternative now does not apply as a Sewer Transportation Agreement and has been approved by both the City of Chula Vista and County of San Diego for the Project. The San Diego County Fire Authority will provide fire services to the Project site. As stated in Section 3.6.2.2 of the EIR, law enforcement will be provided at the Project site by the County of San Diego. There is currently a County of San Diego library located in Bonita. Additionally, new libraries are being proposed to be constructed at or near the Project site, as stated in Section 3.6.2.5 of the EIR. The City of Chula Vista and the Project applicants executed a Development & Cooperation Agreement in December of 2019 to address potential impacts of the Project to the City of Chula Vista. This agreement is included in Appendix D-19 of the FEIR. As stated in Section 3.6.6, the proposed Project would not have significant impacts related to fire, emergency, public safety, or library services. Therefore, analysis of a different service provider is not necessary. CEQA analysis only requires the analysis of a reasonable range of alternatives, which is already included in Chapter 4.0 of the DEIR.

**A-4-78** The County disagrees that the DEIR provides an inaccurate and inadequate conclusion regarding the proposed amendments to visual, aesthetic, and setting description. Specifically, the provision of park access and recreational uses along the Otay Reservoir are not a part of the Project as they are located on land owned by the City of San Diego. The City of San Diego is a Responsible Agency under CEQA and has provided its independent comments to the DEIR.

With respect to the adequacy of the water quality basins adjacent to Otay Lakes Road and the Lower Otay Reservoir, Section 3.7.2.3 and Figure 1.0-8, identify seven water quality basins along Otay Lakes Road to treat runoff before it enters Lower Otay Lake. Section 3.2.2.1 states, "The Project's water quality basins (bioretention basins and vegetated roadside swales), treat 84.5 percent of the Project's developed/disturbed area, provide a high removal efficiency for coarse sediment, trash and debris, a high removal efficiency for pollutants that tend to associate with fine particles during treatment including fine sediment, undissolved nutrients, heavy metals, organic compounds, oxygen demanding substances, bacteria, oil and grease, and pesticides, while providing medium pollutant removal efficiency for dissolved nutrients." When implemented in conjunction with other BMPs outlined in that section, impacts to Lower Otay Lake are reduced to less than significant.

**A-4-79** The County concurs with this comment. The Project is designed as a balanced cut and fill operation with no export of material. Page 3.4-9 of the FEIR has been revised to delete the reference to export of material during site grading.

**A-4-80** The Baldwin Letter identified an offer to reduce the number of units within portions of Villages 13, 14, and 15. The Baldwin Letter contemplated reduction of units in Village 14 from approximately 1,560 units to approximately 1,200 units and within Village 15 from 516 units to 484 units. The changed circumstances refer to the acquisition of Village 15 by conservation agencies to achieve conservation goals and thereby eliminate approximately 500 units from Otay Ranch. While the County disagrees with the commenter, the reference in Section 3.5.1.1 has been updated.

- A-4-81** See Response to Comment A-4-80. Chapter 1.0 of the DEIR discloses the requested actions of the proposed Project and does not include GPA and/or SRPA changes to eliminate development within Village 15. Section 3.5.1.1 explains the justification of this elimination further.
- A-4-82** The text in Section 3.5.1.1 of the FEIR has been updated to more clearly explain the justifications for the shift from multi-family to single-family homes.
- A-4-83** The comment and attendant request for additions/changes to the EIR do not relate to a CEQA impact issue. Discussion of planning rationale would not change the significance determination. Therefore, no further response is required.
- A-4-84** As stated in Section 3.5.2, "implementation of the proposed Project is consistent with growth planned for the area and analyzed in the previously certified Otay Ranch PEIR." At the time the Otay Ranch PEIR was certified, the County estimated that the Project would generate a total of 6,886 residents. Currently, using SANDAG population factors, it is estimated that the Project would generate 6,957 residents. This is a 1.03 percent increase from the originally adopted Otay SRP and does not represent a significant increase in population generated. The discrepancy in the population generation numbers pointed out by the commenter is solely a result of the use of different population factors used for the two analyses. The proposed Project would produce a fewer number of homes as compared to the 2001 amendment; however, average household sizes have increased since 2001. Therefore, although the number of housing units has been decreased, there is still a greater population expected as a result of the Project. The additional household size has been taken into account when analyzing other public resources. Furthermore, an increase in population shall only be considered significant if it is growth inducing or produces significant physical effects on the environment. The DEIR population and housing analysis is different from the PEIR and specifically considers the proposed Project site. The Project-specific analysis concluded growth-inducing impacts to be less than significant. Further, there is no indication that the slight increase in Project population will result in significant impacts beyond those already identified in the PEIR.
- A-4-85** The EIR uses information provided by SANDAG in their regional reports and used standard industry methodology. As SANDAG is a separate government entity, the EIR does not need to explain the process used to generate its estimates. The Project relies upon the internal consistency of SANDAG's forecasts for project- and regional-level projections. For details on SANDAG's forecasting process, see the SANDAG *2050 Regional Growth Forecast Process and Model Documentation*, published June 10, 2010. No changes have been made to the EIR.
- A-4-86** The County disagrees with this comment. As stated in comment A-4-84, there is only a 1.03 percent increase in estimated population generation numbers between the original PEIR and the current Project. The 40.8 percent increase that the commenter cites is between the 2001 Otay SRP amendment and the current Project. Therefore, the information presented in Section 3.5.2 is consistent with Section 3.5.1.1
- A-4-87** As described, Village 13 proposes to locate infrastructure within the Project boundaries to minimize impacts; this decision does not prevent the potential development of land acquired for conservation purposes. Should the development of future projects occur in areas east of the proposed Project, those projects will need to demonstrate adequate infrastructure is available to serve that population.
- A-4-88** The County disagrees with the conclusions reached in the comment. See Response to Comment A-4-80 for a discussion of unit reduction. Further, as stated in Section 3.5.1.1, portions of Village 14 (approximately 230 acres) and Planning Area 16 (approximately 416 acres) were acquired for

conservation. As pointed out in Response to Comment A-4-84, the increase in population would not be as great as the commenter believes. Additionally, impacts that occurred in the City of Chula Vista as a result of previous projects would have been considered in the existing conditions for this EIR. Finally, potential impacts to services within the City of Chula Vista have been addressed in Response to Comment A-4-75.

**A-4-89** The County does not concur with this comment. The concluding statement in Section 3.5.3 of this EIR says that “Growth-Inducing Impacts are analyzed in Section 1.8 of this EIR and are concluded to be less than the impacts contemplated in the PEIR.” The beginning of Section 3.5 clearly states that, “The Otay Ranch PEIR, adopted in 1993, addressed the Otay Ranch development’s growth inducing effect...in accordance with Section 15126(g) of the CEQA Guidelines.” This direct correlation allows for the comparison between the two documents, and therefore no changes have been made to the DEIR.

**A-4-90** The County disagrees the original land use mix modified by the Baldwin Letter is irrelevant in evaluating the proposed Project. The land deleted from development in Village 13 was for environment goals; it is appropriate to consider the mix of housing types in the context of the previous plans or amendments. As all development deleted was of a low-density, single-family home typology, rebalancing the mix of densities is an appropriate planning response.

**A-4-91** See Responses to Comments A-4-84 and A-4-86. As stated previously, the proposed Project would only generate 71 people over what was originally estimated for the Otay SRP. This would be a 1.03 percent increase in population, which would not be substantial. The text in Section 3.5.2 of the FEIR has been updated to clarify this statement.

**A-4-92** The DEIR assumes infrastructure will no longer be required for development east of the Project. This area would have been developed as Village 15; however, the land was acquired for conservation by a public agency. This assumption is consistent with the EIR’s discussion of growth inducement impacts.

**A-4-93** See Response to Comment A-4-92. The Otay Ranch PEIR addressed growth-inducing impacts. The changes to the Otay Ranch planning area as discussed in Section 1.8.1 conclude the total number of homes is less than what was analyzed in the previously certified PEIR.

**A-4-94** The County disagrees with this comment. As stated in the text in Section 3.5.2:

“The Project’s population, housing, and employment projects used by the SANDAG Regional Growth Forecasts were based on the Otay Ranch GDP/Otay SRP, which includes the Project site.”

**A-4-95** The County disagrees with the comment that the previous mix of multi-family and single-family housing is required to meet a specific goal of the County Housing Element. The Housing Element does not allocate specific requirements for housing types or amounts on specific parcels. The Project proposes the number of units currently allocated in the Otay SRP, and therefore does not inhibit the ability of the County to achieve its housing goals. No revisions to the DEIR are required.

**A-4-96** The comment relates to the County Housing Element and the Project’s consistency with this General Plan Policy. This comment relates to the policy discussion of the adequacy of the Project to comply with the Housing Element and does not raise any new issue or make any new substantive comment concerning the adequacy of the DEIR; for that reason, the County provides no further response to this comment.

**A-4-97** See Response to Comment A-4-86. The proposed Project would only generate a 1.03 percent increase in estimated population generation numbers between the original PEIR and the current Project. This is not a substantial increase in population, and therefore no change to the EIR has been made.

**A-4-98** The County concurs with the comment. In response, Section 3.5.6 of the FEIR has been revised to add “Amendments to the County General Plan, Otay SRP, the Otay Ranch RMP, the County Zoning Map and the County MSCP Subarea Plan South County Segment are proposed. Approval of all such amendments and actions would result in Project consistency with all applicable adopted regional and general plans.”

**A-4-99** The County acknowledges and appreciates the comment. However, the comment does not present any issue or make any substantive comment about the adequacy of the DEIR; for that reason, no further response is needed or required.

**A-4-100** The comment requests that the text include the HHW drop-off facility for County residents. Text in Section 2.8.1.1 of the FEIR has been updated to include this information.

**A-4-101** The County acknowledges and appreciates the comment. However, the comment does not present any issue or make any substantive comment about the adequacy of the DEIR; for that reason, no further response is needed or required.

**A-4-102** The County acknowledges and appreciates the comment. However, the comment does not present any issue or make any substantive comment about the adequacy of the DEIR; for that reason, no further response is needed or required.

**A-4-103** The County disagrees with this comment. The funding mechanism for the referenced facilities is the City of Chula Vista Transportation Development Impact Fee (TDIF) program, established in Chapter 3.54 of the City of Chula Vista Municipal Code (“Municipal Code”), and updated in the Eastern Transportation Development Impact Fee, City of Chula Vista Public Works Department (September 2014) (“2014 TDIF Update”). Both the SR-125 & Main Street interchange and the SR-125 & Otay Valley Road interchange are included in the City of Chula Vista’s TDIF program as Facility No. 67 and Facility No. 68, respectively, which ensures full funding for construction of these improvements through the City’s TDIF program. Copies of the Municipal Code and 2014 TDIF Update are included as Attachment A to the FEIR responses to comments.

Thus, in a manner similar to Chula Vista, the County has its own Transportation Impact Fee (TIF) program that provides funding for road improvements within San Diego County, and the Project applicant will pay the applicable County TIF as part of the County’s approval process. (See EIR Mitigation Measures M-TR-11 and M-TR-12.) For more information on the County’s TIF program, please see County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic (August 24, 2011), Section 2.0, pages 4–6.

Finally, it is important to note that the City of Chula Vista’s TDIF program is governed by California Government Code section 66000 et seq. (2014 TDIF Update, p. 2.) That law specifically addresses the imposition of fees as a condition of approval. (Govt. Code section 66001 (a); see also section 66000(b).) Conditions of approval will be included in the CEQA Findings of Fact for the Project, which will be provided with the FEIR. Because the Resort Village/Village 13 Project will be developed within the County’s jurisdiction and, therefore, is subject to the County’s land use approval authority, the County is vested with the statutory

authority under the Government Code to impose traffic impact fees on the proposed Project and not the City of Chula Vista.

**A-4-104** The traffic impact analysis (TIA) utilizes EDUs for the determination of impacts and mitigation triggers. See, e.g., TIA Section 9.7. While the term “building permit” is utilized in the EIR, it is equivalent in this case to EDU for mitigation trigger purposes. However, in response to the comment, the mitigation triggers identified in EIR Section 2.9, Transportation and Traffic, have been revised to be consistent with the mitigation triggers identified in the TIA to refer to EDUs (e.g., M-TR-1: “such that the improvements are operational prior to issuance of a certificate of occupancy for the 728th EDU”).

**A-4-105** The Otay Ranch Mitigation Monitoring Program (MMP) was adopted by the County Board of Supervisors on October 28, 1993, in connection with Otay Ranch General Plan Amendment (GPA) 92-04. The MMP is based on the mitigation required to implement the Subregional Plan of the County Recommended Plan for Otay Ranch. (MMP, p. 1.)

The referenced paragraph 2 states “To the extent that Otay Ranch contributes to the need for a facility outside of its boundaries, the Project shall contribute (at the level at which it impacts the facility) to the mitigation of the impact by participating in impact fee programs or other means identified at the Specific Plan or Tentative Map level.” (MMP, p. 46.)

The MMP expressly provides that if Otay Ranch traffic contributes to the need for a traffic facility (or improvement) outside the Otay Ranch boundaries, then the subject Otay Ranch project may contribute “by participating in impact fee programs or other means identified at the Specific Plan or tentative map level.” In this case, the Otay Ranch Preserve and Resort DSEIR, which includes a Specific Plan and Tentative Map, does not identify payment to the Chula Vista TDIF program for the reasons explained in the FEIR Response to Comment A-4-103. However, the County concurs that additional text should and will be added to Section 2.9.3.4 of the FEIR to more fully address the original Otay Ranch MMP. This text has been added and is included in the FEIR. For additional information on compliance with each of the Otay Ranch MMP measures, see Appendix D-24.

**A-4-106** The County concurs with this comment. Both Section 7.3 of the TIA and the FEIR throughout Section 2.9, Transportation and Traffic, have been revised to reflect the actual jurisdictional operation limits of Otay Lakes Road between Lake Crest Drive and Wueste Road, and between Wueste Road and the City/County boundary line as City of Chula Vista operations, and as County operation limits easterly of the jurisdictional boundary.

**A-4-107** The traffic impact study has determined that a signal would need to be constructed at the intersection of Wueste Road / Otay Lakes Road by the 1,500 single-family equivalent dwelling units (1,500 EDU) in order to mitigate the proposed Project impact at this intersection. The 1,500 EDU trigger for signalization of the Otay Lakes Road/Wueste Road intersection is based on the results of the Existing Plus Project conditions analysis. The Existing Plus Project analysis is the impact analysis methodology required by the County as lead agency under CEQA. See County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic (August 24, 2011), Section 4.0, Guidelines for Determining Significance.

However, in response to the comment, the operative trigger for all mitigation measures relating to significantly impacted facilities located within the City of Chula Vista will be revised based on the results of the cumulative year 2025 analysis in Section 2.9 of the EIR. Specific to

signalization of the intersection of Otay Lakes Road/Wueste Road, using the Cumulative 2025 analysis to determine the mitigation trigger will result in an accelerated trigger as compared to 1,500 EDU because the determination of significant impacts, and correspondingly the mitigation trigger, will be based on Cumulative 2025 background traffic levels, rather than existing traffic levels, which will be higher.

Based on the results of the Cumulative 2025 peak hour analysis, the mitigation trigger for signalization of the Otay Lakes Road/Wueste Road intersection will be revised downward to the 1,234 EDU. The 1,234 trigger was determined by calculating the maximum traffic volume that the Project would contribute to the intersection before resulting in a significant impact. The 1,500 EDU trigger was calculated using existing traffic volumes as the base and then adding Project traffic until the intersection operated at an unacceptable LOS, whereas the 1,234 trigger was determined using the 2025 cumulative traffic volumes as the base, which includes traffic from cumulative projects as well as regional growth. As a result, the cumulative traffic causes the intersection to fail at a quicker pace, thus resulting in a lower EDU trigger. Detailed calculations including analysis worksheets are provided in Appendix AA of the TIA.

As a result, the TIA and Section 2.9, Transportation and Traffic, of the FEIR Mitigation Measure M-TR-7 will be revised to reflect a mitigation trigger of 1,234 EDU. Use of the Cumulative 2025 analysis trigger will eliminate the need for a signal warrant monitoring and bond program.

**A-4-108** See Response to Comment A-4-107.

**A-4-109** The comment regards the TIA relating to signalization of the Otay Lakes Road/Wueste Road intersection. Currently, there are five northbound left-turn movements at the intersection of Wueste Road and Otay Lakes Road. (TIA, Figure 3-2A.) Although no new land uses are planned near the intersection that would support the commenter's claim of an increase in traffic for the northbound left-turn movements, due to the potential for a slight increase in regional growth generally, the TIA conservatively doubled the existing volumes as part of the analysis in assessing the intersection's impacts. (TIA, Figure 7-2A.) As such, any potential increase was accounted for as part of the analysis.

In addition, the planned university and other future growth in Chula Vista, which would occur southwest of the intersection, would only potentially affect the northbound right-turn movements (not left-turn movements) at this approach as area traffic would not travel northeast to the Wueste Road/Otay Lakes Road intersection but, instead, would use Olympic Parkway or Main Street. (TIA, Appendix F.)

**A-4-110** The requested figure illustrating the cross sections of Otay Lakes Road at the County/City of Chula Vista boundary under impacted and mitigated conditions is included in the TIA as Figure 5-2 and in the FEIR as Figure 2.9-32.

**A-4-111** The referenced TIA page 3 table has been revised to include a title and table number. The revised table is included in the revised TIA, included as Appendix C-12 of the FEIR.

**A-4-112** The #7 referenced in the comment is the brief overview description of TIA Section 7.0, Cumulative Traffic Conditions, that appears in TIA Section 1.0, Introduction. The TIA describes the modeling process in detail in Section 7.0 (page 72). Section 7.0 explains that SANDAG's Series 11 Year 2025 Transportation Model was utilized to forecast cumulative (Year 2025) traffic volumes, and that the most recent City of Chula Vista approved model was utilized as a starting point to ensure the accuracy of the modeling assumptions within the City's jurisdiction. (TIA, p.

72.) To provide additional clarification, Section 7.0 of the TIA has been revised to include additional detailed description of the modeling process, as well as the cumulative projects included in the modeling process.

**A-4-113** The County disagrees with this comment. The Project study area is shown in Figure 1-2 of the TIA. Please see TIA pages 150 through the end of the report for all figures.

**A-4-114** Buildout of the proposed Project is anticipated by Year 2025, which is why the Cumulative 2025 scenario was selected for analysis. (TIA, pp. 4 and 5.) In addition to the Cumulative 2025 scenario, three other scenarios were analyzed to provide a comprehensive assessment of the Project's potential impacts: (1) Existing plus Phase I, which analyzes the Project's direct impacts at partial buildout; (2) Existing plus Project, which analyzes the Project's direct impacts at full buildout; and (3) Future Year 2030, which analyzes the Project's cumulative impacts under long-range conditions. (Id.)

Regarding the comment that there could be a number of years prior to 2025 when the Project is on line but no analysis has been conducted, the comment overlooks the Existing plus Phase I scenario which, as noted above, addresses the Project's potential impacts under a partial buildout scenario.

Moreover, as to the concern that there could be traffic impacts prior to 2025 that have not been identified, the analyses presented in the TIA identify the Project's significant impacts and corresponding mitigation based on an EDU trigger, not an analysis year, which eliminates the likelihood of significant impacts going unidentified. For example, the improvement required to mitigate the Project's cumulative impact under the 2025 Cumulative scenario at the Otay Lakes Road/Wueste Road intersection is signalization by the 1,234th EDU, not by year 2025. That is, the TIA identified traffic generated by the Project's 1,234th EDU, in combination with cumulative traffic, as when the significant impact would occur. (TIA, pp. 76-81 and 92-93.) Therefore, the analyses accurately identify both the timeframe during which the potential significant impact would occur and the corresponding mitigation trigger such that the Project's impacts will be mitigated in a timely manner.

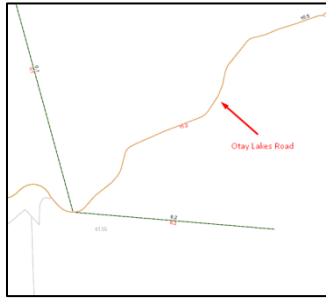
Regarding the comment that TIA Section 4.0 should be titled as shown but add "Project Phasing," the TIA will be revised to add a new subsection heading 4.1.2, Project Phasing, to precede the TIA text discussion in Section 4.0.

As to the comment that the Existing plus Phase I scenario misses background traffic in Chula Vista, as noted above, the County of San Diego considers the Existing plus Project analysis scenarios as the operative scenario for assessing the Project's impacts as these scenarios isolate Project impacts. However, the Cumulative 2025 scenario includes all projects anticipated to be developed by year 2025, including Village Two and University Villages. Also as noted above, the mitigation trigger for all significant impacts identified within the City of Chula Vista will be revised from the Existing plus Project trigger to the Cumulative 2025 analysis trigger.

**A-4-115** In response to the comment, an EDU discussion will be added to the TIA and included in the FEIR, in the paragraph immediately following Table 4.1.

**A-4-116** The SANDAG Series 11 model shows Traffic Analysis Zone (TAZ) 4135 (Planning Area (PA) 17) as generating 6,227 ADT. A screen shot of the model output is provided below and will be included in Appendix F to the FEIR.





As shown, the model calculated approximately 6,200 ADT (6,227 rounded to the nearest hundredth) coming out of TAZ 4135. However, this trip generation output is inconsistent with the land uses planned for PA 17. Based on the Otay Ranch General Development Plan, which governs the land uses for PA 17, the PA 17 land uses are designated as 296 Single Family Residential units, with the remainder of the Planning Area designated as Open Space. (See <http://www.chulavistaca.gov/home/showdocument?id=6777>, adopted: October 1993 and last revised on February 2013.)

These 296 Single Family Residential units would generate 2,960 ADT as compared to the 6,227 ADT included in the model (trip generation calculated using the SANDAG Not So Brief Trip Generation Guideline for the San Diego Region). As a result, the traffic engineer made manual adjustments to the Series 11 Model, based on the actual planned land uses, in order to accurately reflect both the correct trip generation, as well as the correct Resort Village/Village 13 Project trip distribution patterns. This did not result in a change to the DEIR's significance conclusions. The PA 17 manual adjustment calculations and model output are provided in Appendix F of the TIA.

**A-4-117** The County disagrees with this comment. There is no inconsistency in the information provided on TIA pages 37 and 51. Page 37, paragraph 5.1, reports the roadway network for the Existing plus Phase I analysis, which assumed the middle Project driveway (Project Driveway #2 [roundabout]) along Otay Lakes Road would provide access for Project traffic. Page 51, in comparison, describes the road improvements recommended to mitigate the identified impacts under the Existing plus Phase I scenario. To avoid confusion, the revised TIA included in the FEIR includes intersection identification numbers for all driveway discussions in the text.

**A-4-118** The County concurs with this comment. Table 5.1 illustrates the peak hour intersection LOS results under the Existing plus Phase I scenario. As the comment notes, Table 5.1 does not identify any significant impacts. To be distinguished from intersection #2, Project Driveway #2 (which is actually intersection #43) is a project design feature that will be constructed by the applicant as part of the Project in order to provide access to and from the Project site. The revised TIA included as Appendix C-12 of the FEIR clarifies that the Project will construct all Project driveways to provide frontage and access.

**A-4-119** The Traffic Impact Study (TIS) originally utilized single-family residential units as the measure for the mitigation trigger. Single-family units were determined to generate 10 trips per dwelling unit. For the purpose of the TIS, single-family dwelling unit was used as the equivalent of Single Family Equivalent Dwelling Unit (EDU). To clarify this in the TIS, all references to residential unit have been revised to EDU.

The 728th EDU trigger for mitigation improvements to the segment of Otay Lakes Road between Wueste Road and the County/City of Chula Vista boundary is based on the results of the Existing Plus Project Phase I conditions analysis. However, as with signalization of the Otay Lakes Road/Wueste Road intersection (see Response to Comment A-4-107 above), the subject mitigation measure will be revised to reflect a mitigation trigger based on the results of the Cumulative year 2025 analysis in place of the Existing plus Project (Phase I) analysis. Based on the Cumulative year 2025 peak hour analysis, the mitigation trigger for widening Otay Lakes Road between Wueste Road and the County/City boundary will be revised downward to the 384th EDU. The 384 trigger was determined by calculating the maximum traffic volume that the Project would contribute to the road segment before resulting in a significant impact. The 728 EDU trigger was calculated using existing traffic volumes as the base and then adding Project traffic until the segments operated at an unacceptable LOS. In comparison, the 384 trigger was determined using the 2025 cumulative traffic volumes as the base, which includes traffic from cumulative projects as well as regional growth. As a result, the cumulative traffic causes the segments to fail at a quicker pace, thus resulting in a lower EDU trigger. Detailed calculations including analysis worksheets are provided in Appendix AA of the TIA.

As a result, the TIA and FEIR Section 2.9, Transportation and Traffic, mitigation measures M-TR-9 and M-TR-10, have been revised to reflect a mitigation trigger of 384 EDU.

**A-4-120** The Project roundabouts will be constructed by the Project as project design features for frontage and access improvements. TIA Sections 5.1, 6.1, and 12.1 have been revised to clarify this point, as has FEIR Section 2.9, Transportation and Traffic, and FEIR Section 1.0, Project Description. Roundabout delay and LOS are provided in Sections 5.0, 6.0, 7.0, and 8.0 of the TIA. Roundabout feasibility and design was conducted by Alternative Street Design, P.A.

**A-4-121** TIA page 51 describes the roadway improvements required to mitigate the significant impacts identified under the Existing plus Project (Phase I) conditions scenario. Phase I of the Project would not cause a significant impact at the referenced segment of Otay Lakes Road, between Lake Crest Drive and Wueste Road.

To the extent the comment is referring to the coordination of mitigation for the two segments of Otay Lakes Road between Lake Crest Drive and Wueste Road and the County/City of Chula Vista boundary, as explained in Responses to Comments A-4-119 and A-4-127, the EIR and TIA have been revised to utilize the cumulative year 2025 analysis results and corresponding mitigation trigger for the widening of Otay Lakes Road for both of the two segments between Lake Crest Drive and the County/City boundary. As a result, the mitigation triggers for both segments are 384 EDU. This eliminates any potential operational concerns and avoids potential bottleneck issues that would result from differing mitigation triggers. Detailed calculations including analysis worksheets are provided in Appendix AA of the TIA.

**A-4-122** TIA page 53 marks the beginning of Section 6.0, the analysis of Existing plus Project (Buildout) Conditions. Section 6.1 refers to the three Project Driveways noting that intersection and roadway geometrics under the Existing plus Project scenario are assumed identical to existing conditions, with the exception of the addition of the three Project Driveways. As noted above, the three Project Driveways will be constructed by the applicant as part of the Project.

The 2nd Project Driveway (intersection #43) was first mentioned on TIA page 37 as part of the discussion of the assumed Existing plus Project (Phase I) network. For clarification purposes, the FEIR will include revisions to the TIA to include a statement that the Project will construct Project Driveway #2 (intersection #43) by the 1st EDU for frontage and access. Project Driveway

#3 (intersection #44) will be constructed to provide frontage and access for the eastern portion of the development, and will be constructed by 1,729 EDU. As to Driveway #1 (intersection #42), the driveway will be constructed by the 926th EDU for frontage and access to the western portion of Resort Village.

**A-4-123** The County disagrees with this comment. TIA Figure 7-1B, Roadway Geometrics – Cumulative Year (2025) Conditions, is properly referenced on TIA page 75 as it addresses the Cumulative (Year 2025) scenario. The Figure 8 sequence addresses the Future Year (2030) conditions.

**A-4-124** Based on information provided by the Project applicants, and as indicated on page 36 of the TIA, the Project is anticipated to be fully constructed by Year 2025 and, as such, the TIA used 2025 as the buildout year for purposes of analysis. It should be noted that a supplemental analysis was conducted for Alternative H, which uses the Buildout Year of 2030. This analysis can be found in Appendix D-12 of the FEIR.

As to the three Project driveways, as indicated in Response to Comment A-4-122 above, Project Driveway #2 (intersection #43) will be constructed by the applicants by the 1st EDU in order to provide frontage and access to the Project site. Driveway #3 (intersection #44) will be constructed to provide frontage and access for the eastern portion of the development, and will be constructed at 1,729 EDU. The TIA, as included in the FEIR, has been revised to include this information under the discussion of the Existing plus Project (Buildout) network. Project Driveway #3 (intersection #44) will be constructed to provide frontage and access for the eastern portion of the development, and will be constructed by 1,729 EDU. As to Driveway #1 (intersection #42), the driveway will be constructed by the 926th EDU for frontage and access to the western portion of Resort Village.

**A-4-125** The County disagrees with this comment. The TIA page referenced in the comment, page 87, states that under Existing plus Project (Phase 1) conditions “the proposed Project would cause a project specific/direct impact” to the segment of Otay Lakes Road between Wueste Road and the City of Chula Vista/County boundary. No revisions are necessary.

**A-4-126** As previously explained in Response to Comment A-4-107, the determination of the 1,500th EDU as the mitigation trigger to signalize the intersection of Otay Lakes Road/Wueste Road is based on the results of the Existing Plus Project conditions analysis. In response to the comment, both FEIR Section 2.9 Mitigation Measure M-TR-7, and the corresponding TIA sections, have been revised to utilize the cumulative year 2025 analysis trigger, or 1,234 EDU. Detailed calculations including analysis worksheets are provided in Appendix AA of the TIA.

**A-4-127** The determination of the 910th EDU as the mitigation trigger to widen Otay Lakes Road between Lake Crest Drive and Wueste Road is based on the results of the Existing Plus Project conditions analysis. In response to the comment, the mitigation trigger has been revised based on the results of the cumulative year 2025 analysis. Based on the cumulative year 2025 peak hour analysis, the mitigation trigger for widening Otay Lakes Road between Lake Crest Drive and Wueste Road will be revised downward to the 384th EDU. As explained in Response to Comment A-4-119, the 384 trigger was determined by calculating the maximum traffic volume that the Project would contribute to the road segment before resulting in a significant impact.

Detailed calculations including analysis worksheets are provided in Appendix AA of the TIA. (See related Response to Comment A-4-119 regarding the segment of Otay Lakes Road between Wueste Road and the County/City of Chula Vista boundary.)

**A-4-128** As explained above in Responses to Comments A-4-119 and A-4-127, the EIR and TIA have been revised to utilize the cumulative year 2025 analysis results and corresponding mitigation trigger for the widening of Otay Lakes Road between both Lake Crest and Wueste Road, and between Wueste Road and the City of Chula Vista /County boundary. As a result, the mitigation trigger for both segments is 384 EDU. Therefore, all practical concerns regarding construction of the improvements during two separate timeframes have been resolved. So, too, have all potential operational concerns regarding easterly travel and potential bottleneck issues. Detailed calculations including analysis worksheets are provided in Appendix AA of the TIA.

**A-4-129** The County concurs with this comment. Both the TIA and FEIR Section 2.9, Transportation and Traffic, have been revised to reflect this comment so that the text states “Otay Lakes Road between City of Chula Vista/County boundary and Project Driveway #1/Intersection #42 (County).” Within unincorporated County, Otay Lakes Road is included in the County TIF Program.

**A-4-130** As the comment acknowledges, the TIA and EIR include mitigation requiring that the Project applicant widen Otay Lakes Road from two lanes to four lanes between Lake Crest Drive and the County/City of Chula Vista boundary. (DEIR, mitigation measures M-TR-5 and M-TR-6 [Existing plus Project scenario], and M-TR-9 and M-TR-10 [2025 Cumulative scenario].)

The identified improvements are consistent with both the City of Chula Vista’s Circulation Plan and its TDIF program. The Circulation Plan identifies the segment of Otay Lakes Road between Lake Crest Drive and the City/County boundary as a 6 Lane Prime road, and the widening of the segment between Lake Crest Drive and Wueste to a six-lane Prime is an improvement identified in the City of Chula Vista’s TDIF program. Widening the segment from the current two-lane configuration to four lanes, as recommended by the mitigation measure, would not conflict with the City’s long-range widening plans (six lanes) because the mitigation improvements (widen from two to four lanes) do not foreclose or conflict with the City’s ultimate buildout plans or program. (DEIR p. 2.9-47.) Moreover, if implemented, the mitigation improvements would fully mitigate the Project’s project-specific (Direct) impacts to the segment of Otay Lakes Road between Lake Crest Drive and the County/City boundary. (Id.)

As to the widening of this segment of Otay Lakes Road from four to six lanes, as explained in Response to Comment A-4-103, above, the cost to construct certain identified road improvements within the City of Chula Vista is provided through the City’s TDIF program under which future development within the City of Chula Vista pays TDIF fees to fund those improvements made necessary by such development.

The transportation facilities to be financed by the TDIF include widening Otay Lakes Road between Lake Crest Drive and Wueste Road to a 6-Lane Prime Arterial (referenced facility #28b). (2014 TDIF Update, Table E, TDIF Program Facility List.) Additionally, based on information provided by the City of Chula Vista, widening Otay Lakes Road to a 6-Lane Prime Arterial between Wueste Road and the City/County boundary is anticipated to be added to the City’s TDIF program by December 2015. (TIA, p. 99.)

As such, the costs to construct the referenced widening of Otay Lakes Road from four to six lanes between Lake Crest Drive and the City/County boundary will be provided in full through applicable developer participation in the City’s TDIF program. And, as previously noted, the developer of Resort Village/Village 13 will participate in that funding through its other Otay Ranch developments located within the City of Chula Vista. (See 2014 TDIF Update, Table A.)

To require the applicant to pay the TDIF in connection with development of the Resort Village/Village 13 Project would result in duplicative payments directly contrary to the purpose of the TDIF program, to spread the costs associated with construction of the facilities equitably among the developing properties. (2014 TDIF Update, p. 2.)

**A-4-131** See Response to Comment A-4-124 above for information responsive to this comment.

**A-4-132** Both the TIA and FEIR Section 2.9, Transportation and Traffic, have been revised to add discussion of the City of Chula Vista's TDIF program.

**A-4-133** In response to the comment, the FEIR includes a land use inventory in the TIA, Appendix F.

**A-4-134** As noted in Appendix C-7, Part 10, Figure 15, the concrete headwall would outlet at the toe of fill slope or into controlled surface drainage. The planned subdrains and head walls will be installed for the planned buttresses and stability fills. These drains are necessary for the structural stability of the slopes, fill, and adjacent improvements. These types of drains are allowed under the MS4 permit (see MS4 permit Attachment A 2.A.1.a(3) and 2.A.1.e(2)). Therefore, no mitigation is required and no changes have been made to the EIR.

**A-4-135** The County concurs that water discharged from slope drains into the reservoirs should be treated. However, water discharged over landscaped areas is treated naturally through the ground's soil layers prior to reaching the slope subdrain. Therefore any further treatment is not necessary. Additionally, the use of water quality basins is discussed in Response to Comment A-4-140.

**A-4-136** See Response to Comment A-4-135.

**A-4-137** The County agrees with this comment. Mitigation measure M-GE-1c has been added to FEIR Section 2.5.5.1.

**A-4-138** The commenter is referring to text from a geotechnical appendix of the EIR. The EIR analysis of geology and soils does not address potential impacts associated with settlement; therefore, no additional mitigation measures are required. No changes have been made to the EIR.

**A-4-139** The County does not have jurisdiction over the pavement used for the construction of roads in the City of Chula Vista. Additionally, the comment does not address the adequacy of the DEIR, and therefore the County provides no further response to the comment.

**A-4-140** The water quality basins being proposed next to roadways as a part of this Project will be lined; therefore, water will not be able to migrate through to undesired areas. The presence of these basins does not warrant the preparation of a hydrology study, as the water quality basins are evaluated in Appendix C-13 and C-14 of the EIR. Further, impacts to water quality are thoroughly analyzed in Section 3.2 of the DEIR. No changes to the FEIR have been made.

**A-4-141** The County disagrees that there is evidence in Section 2.6.1.9 that refutes the finding of less than significant impacts due to airfield operations. Section 2.6.1.9 provides background and operational information about John Nichol's Airfield, and does not include evidence of a significant hazard impact.

**A-4-142** The comment states that there has been no analysis of impacts to flight operations due to dust during construction (including rock crushing).

In response, Section 2.2, Air Quality, of the DEIR presents estimated maximum daily emissions of fugitive dust. Section 2.2 also presents mitigation measures designed to reduce impacts from fugitive dust. Specifically, Section 2.2-5 on page 2.2-17 presents mitigation measure MM-AQ-1a, which requires implementation of measures to control fugitive dust during construction activities; and mitigation measure MM-AQ-1b, which requires the preparation of a Dust Control Plan. Regarding rock crushing, mitigation measure MM-AQ-1a requires that “Water sprayers shall be installed on the rock crushing equipment to control particulate emissions during crushing operations.”

In addition to the mitigation measures designed to reduce fugitive dust during construction, Section 2.2, Air Quality of the DEIR identifies the San Diego Air Pollution Control District Rules and Regulations to which the proposed Project will be subject. Rule 55 requires that “No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60 minute period.” The Project will therefore be required to comply with this rule, and will not be allowed to discharge substantial visible dust emissions into the atmosphere that would affect flight operations.

The mitigation measures proposed for the Project are consistent with other construction projects throughout California, including construction projects that occur at airports themselves. For example, the fugitive dust control measures proposed for the Project are similar to the dust control requirements within the Los Angeles World Airports (LAWA) Standard for the Construction Contract ([http://www.lawa.org/uploadedFiles/LAXDev/Construction\\_Handbook/LAWA%20Stnds%20for%20Const%20Contract%20%20Jan%2010%202014.pdf](http://www.lawa.org/uploadedFiles/LAXDev/Construction_Handbook/LAWA%20Stnds%20for%20Const%20Contract%20%20Jan%2010%202014.pdf)). Thus emissions of fugitive dust from construction of the proposed Project would not result in specific impacts to flight operations.

Because the DEIR determined that the proposed Project’s impacts on airfield operations would be less than significant (DEIR Section 2.6.2.3), there was no need to develop mitigation measures regarding height limits for buildings or slopes.

**A-4-143** The County disagrees with this comment. While the County does experience Santa Ana wind conditions from the east, at John Nichol’s Airfield 98 percent of the time winds are from the west. Therefore, all takeoffs and landings occur from east to west and are not rerouted during Santa Ana conditions. This has been identified in Section 2.6.1.9 of the EIR and Attachment B of Appendix C-20 to the EIR. Because there are no changes in air traffic patterns due to wind conditions at John Nichol’s Airfield, the CEQA analysis in the DEIR is adequate. Additionally, the Project would not result in changes to air traffic patterns, including either an increase in traffic levels or a change in location that results in a substantial safety risk. Therefore, no substantive changes to the EIR or Appendix have been made.

**A-4-144** The County appreciates this comment and agrees that this statement is contained in the County Airport Guidelines. However, this comment does not raise a substantive issue as to the contents of the DEIR, and therefore the County provides no further response to the comment. See also Response to Comment A-4-142, above. In addition, as explained in the DEIR, the standards in question do not apply to private use airfields such as John Nichols Airfield.

**A-4-145** As an initial matter, the airfield is privately operated pursuant to a lease with the City of San Diego, which owns the land on which the airfield is located. Because the lease is subject to expiration and/or termination, it is considered temporary. Nevertheless, the status of the airfield

as either temporary or permanent does not affect the impact analysis for the proposed Project. The technical recommendations given in the Area B TM Level Geotechnical Investigations report would be the same whether the ultra-light gliding and parachuting airport is temporary or permanent. Therefore, since no substantive change would result from changing the description of the airport, no change to the Appendix has been made. See Response to Comment A-3-42 for additional information.

**A-4-146** The County disagrees that there are significant impacts associated with Fire and Emergency Services. The DEIR has analyzed provision of Fire and Emergency Services from a new fire station located in the Project site and therefore the impacts have been considered and analyzed. The proposed Project was analyzed using SDCFA as the service provider because the Project is physically located in an unincorporated area within the SDCFA jurisdictional boundary and not in the City of Chula Vista. As such, SDCFA is the Fire Authority Having Jurisdiction (FAHJ) and will be serving the Project. Additionally, there are no existing fire stations, regardless of jurisdiction, that can provide a response to the most remote location of the Project site within the San Diego County General Plan's 5-minute travel time standard. The Chula Vista Fire Department's closest station, Fire Station 8 (FS 8), is approximately 1.5 miles from the Project's entrance. At modeled response speeds, apparatus located at FS 8 can respond to roughly 60 percent of the Project within the 5-minute travel time standard. This does not meet the General Plan requirement. See Global Response 3: Travel Time and Standard Methodology.

This position is clearly supported by the 2012 Chula Vista Fire Department Fire Facility, Equipment and Deployment Master Plan that states this area is “remote from the balance of the existing (Chula Vista Fire Department) service delivery system” and “will significantly increase arrival times” for Chula Vista Fire Department resources. Further, the report states that “this development area will definitely need a fire station to serve it” and that the distance from FS 8 to the center of the Resort Area is “too great to provide adequate coverage from FS 08” and as a result “will require a new fire station to provide first due response...”

The Project will be financially capable of providing a fire station and SDCFA staffing onsite to meet the County travel time standard. In addition to providing ongoing operations and maintenance funding, see Response to Comments A-4-163.

**A-4-147** The County disagrees that the request for dissolution will have any measurable negative effect on the Project, its fire response, or its environmental impacts. The dissolution of Rural Fire Protection District is functionally and operationally complete and the transition to SDCFA has been seamless with regard to staffing, apparatus, and operations and will continue without interruption. The remaining elements of the transition are centered primarily on administrative details.

With regard to comment about why the proposed Project is proposed to be serviced by SDCFA as opposed to the City of Chula Vista Fire Department, see Response to Comment A-4-146.

**A-4-148** The County acknowledges and appreciates the comment. However, the comment provides general introductory information that does not raise any issue or make any substantive comment with regard to the adequacy of the DEIR. For that reason, the County provides no further response to this comment.

**A-4-149** The County disagrees with the comment that the proposed Project will increase response times and other performance standards. This comment appears to be based on the 2012 Chula Vista Fire Department Fire Facility, Equipment and Deployment Master Plan that assumes the proposed

Project would be annexed into the City of Chula Vista and served by the Chula Vista Fire Department. The DEIR analyzed the proposed Project, which would be in an unincorporated area within the SDCFA jurisdictional boundaries assuming service would be provided by the FAHJ, which is SDCFA. The proposed Project would also include a fire station within the development footprint. With that in mind, the proposed Project will decrease response times for this portion of SDCFA jurisdictional area by providing a new fire station (FS 34) within the Project site. Response time from FS 34 to the most remote parcel in the Resort is estimated to be 3.8 minutes and much less for most of the Project site, which is well within the County General Plan travel time standard of 5 minutes. The addition of FS 34 would provide supplemental emergency response benefits to the eastern part of the City of Chula Vista unless the existing automatic aid agreement is no longer honored by Chula Vista Fire Department or an updated agreement is not executed. See Global Response 3: Travel Time and Standard Methodology and Response to Comment A-4-152.

With regard to requiring expanded roads for evacuation purposes, the Project meets or exceeds the fire apparatus access road requirements set forth in the San Diego County Consolidated Fire Code, and State Title 14, Fire Safe Regulations in State Responsibility Area (SRA), related to road widths, primary and secondary access location, and remoteness. The San Diego County Fire Code requires minimum unobstructed road widths of 24 feet, which exceeds the minimum state model fire code requirements, and the road width requirements found in the SRA Fire Safe Regulations. There is a Fire Protection Plan was done and included as Appendix 1-B of the Specific Plan Amendment. A Wildland Urban Interface (WUI) plan will be created for the proposed Project, which will provide detail on evacuation in the event of a wildfire.

The County agrees with the comment that there is one route to the west on Otay Lakes Road and that it is possible that fire could impact an evacuation to the west. However, there is also a route to the east on Otay Lakes Road that would provide a second possible means of evacuation. The State and County requirement for secondary access has been met and includes wildfire considerations as well as considerations for other potential natural or man-made disasters/emergency scenarios. Emergency evacuation planning considers fire and other emergency scenarios and determines an appropriate evacuation protocol. However, because each fire incident is unique, the evacuation protocols are limited to guidelines; actual occurrences will determine how an evacuation event is approached and implemented. The FPP provides direction on the preparation of an evacuation plan that will focus on early evacuation following the nationally recognized "Ready, Set, Go!" model and contingencies if that model is determined not applicable for a given emergency event.

**A-4-150** The County disagrees that the required 100 feet of defensible space will result in an impact on CVFD's ability to provide service. The SDCFA enforces defensible space standards that have been codified at the state level (PRC 4291) and adopted throughout most fire jurisdictions in California, including most fire agencies in San Diego County. Implementation of 100-foot fuel modification zones combined with ignition-resistant construction features has been shown, in most cases, to be an effective strategy for increasing structural survivability during wildland fire events and providing a safe operating space for firefighters. In fact, Cohen's (1998) studies indicate that approximately 30 to 50 feet of defensible space is successful, in most cases, for avoiding ignitions of exposed wood.

For this Project, 100-foot fuel modification zones provide more than twice the distance of the maximum projected worst-case scenario flame lengths of 46 feet, as shown in Section 3.2.1 of the FPP (included as Appendix C-21 of the FEIR). New structures in this development will include highly ignition-resistant construction features, including exterior walls, doors, and vents in



accordance with Chapter 7A of the County Building Code and will have setbacks of 100 feet from off-site fuels. Further, the development has eliminated all pockets, peninsulas, and/or islands of highly combustible native vegetation from within the Project perimeter. This will limit paths of travel for fire to the interior of the Project and reduce the potential for long fire perimeters, which will likely reduce fire suppression resource intensity needs.

The County disagrees that the fuel modification zones should be increased from 100 feet to 150 feet. A 100-foot fuel modification zone is consistent with County Code, and increasing the fuel modification zone to 150 feet would increase Project impacts. Moreover, there is no science-based evidence or analysis indicating that providing fuel modification zones beyond 100 feet would provide any discernable benefit in this circumstance.

It is not clear in the comment how CVFD's analysis resulted in their conclusion that the provided defensible space will impact their ability to provide services. However, based on the provided facts, no additional response is necessary.

**A-4-151** This comment simply provides a quotation from the DEIR and therefore requires no response.

**A-4-152** The Project site will be served by SDCFA during construction and operation of the proposed Project. The County disagrees that the Project's FPP is out of date (it should be noted, however, that a new FPP has been prepared for Alternative H as part of the 2019 Recirculation Package), and further disagrees that CVFD FS 8 will be able to respond to the Project within the County's General Plan travel time standard of 5 minutes. Modeling indicates that the apparatus from Fire Station 8 can only reach approximately 60 percent of the Project within 5 minutes' travel time, which clearly does not satisfy the 5-minute travel time standard. See Global Response 3: Travel Time and Standard Methodology.

The County agrees that the DEIR should include an analysis of alternative sources of Fire and Emergency Services should Chula Vista decide to not honor the existing automatic aid agreement or enter into an updated automatic aid agreement. The Project will not be relying on Chula Vista Fire Department for fire or emergency medical response. See Global Response 4: Fire Service Provision.

**A-4-153** The comment simply provides a quotation from the San Diego County General Plan Safety Element. It does not address the DEIR and therefore no response is required.

**A-4-154** The comment simply provides a quotation from the San Diego County General Plan Safety Element. It does not address the DEIR and therefore no response is required.

**A-4-155** The County disagrees with this comment regarding staffing and response capabilities of Station 36. See Global Response 4: Fire Service Provision.

**A-4-156** The County disagrees that an automatic aid agreement is necessary to ensure Chula Vista Fire Department FS 8 and other CVFD fire stations are available to provide aid to Village 13. Village 13 can be served without the use of CVFD resources (see Response to Comment A-4-152 and Global Response 3: Travel Time and Standard Methodology, and 4: Fire Service Provision; however, the County agrees that an automatic aid agreement with CVFD would be beneficial for both agencies and would provide regional public benefits).

The County disagrees that there would be a funding gap for FS 34 located in the Project site. A fire service agreement will be entered into between the Project and the SDCFA and appropriate

funding will be provided based on special assessments or similar means so that the funding required for one-time capital costs and ongoing costs associated with staffing, operations, and maintenance are in place. The dissolution is completed, and staffing, equipment, and operations have been substantially improved in this area (see Global Response 4: Fire Service Provision). Therefore, the County disagrees that the DEIR should be revised and recirculated to address impacts that the dissolution would have on fire and medical services and the sufficiency of revenues to fund ongoing staffing and operating costs.

**A-4-157** The County disagrees with the assertion that Village 13 needs to formulate a response to the LAFCO process.

The terms and conditions of the dissolution of and the activation of the latent powers in CSA-135 have been extensively reviewed and approved by LAFCO and the County Board of Supervisors. This review included full analysis of the financial feasibility of the plan as well as analysis of the regional impacts.

**A-4-158** The County agrees with the comment that multiple unit responses may be needed to mitigate certain call types and that these may be low in frequency but high consequence events, or what could be considered “threshold” events.

SDCFA will provide fire services both from the interim, temporary onsite fire station and the permanent station.

See Global Response 4: Fire Service Provision for the next closest SDCFA fire stations to the Project site that are currently part of the SDCFA Standard of Cover and Standard Response Plan.

The County agrees with the comments for that particular section of NFPA 1710; see Global Response 5: Determining Adequacy of Response/NFPA 1710, for cumulative response details.

**A-4-159** The County disagrees that the EIR needs an exhibit indicating the locations of all Chula Vista Fire Stations because (i) the Project is within the SDCFA jurisdiction, (ii) initial response meets the 5-minute travel time standard, and (iii) additional response from SDCFA, as outlined in Global Response 4: Fire Service Provision, is provided within an acceptable range related to staffing and travel times; therefore, additional analysis with out-of-area fire stations is not needed. The County agrees that the location of the Chula Vista reserve engine and ladder truck has been updated in Section 3.6.1.1 of the FEIR to reflect its new location at Fire Station 7.

**A-4-160** The County agrees that the location of Brush 56 is represented inaccurately in Section 3.6.1.1 of the DEIR, and Section 3.6.1.1 of the FEIR has been updated accordingly. The County disagrees that Brush 56, located at 605 Mt. Miguel Rd, is the closest Type III engine company to the Project. There will be a CAL FIRE Type III structural/wildland interface Engine Company available in FS 34, which is located in the Project site (also see Global Response 5: Determining Adequacy of Response/NFPA 1710). Wildland fire responses will be in accordance with the SDCFA Standard Response Plan and will include the Type I and Type II engine companies located in FS 34 that will be serving the Project. Because the Project is located in State Responsibility Area (SRA), in addition to a standard response from SDCFA, CAL FIRE will provide an extremely robust high wildland response, which will include approximately 98 firefighting personnel in the following configuration:

- 10 Type III wildland fire engines
- 2 Battalion Chiefs

- 3 fixed-wing aircraft (two heavy air tankers and an air attack ship)
- 2 helicopters
- 2 Dozers
- 4 hand crews

While it is possible that Brush 56 may respond as a result of existing mutual or automatic aid agreements to a wildland fire (with or without the Project's presence), the cumulative response to wildland fire events described above is completely independent of that; therefore, impacts to Chula Vista's fire services are unlikely.

The Project's FPP has been updated to reflect the weight of the response for wildland fires.

**A-4-161** The County agrees that the travel times estimated in Section 3.6.1.1 are not represented accurately and need to be adjusted slightly. The travel times from Station 36, which is located some 10 road miles from the proposed Project, were estimated to be between 12 and 13 minutes (not 11 and 12 minutes, as referenced in the comment). The travel time from FS 36 to the most remote point in the Project has been revised to 19.6 minutes; also see Global Response 3: Travel Time and Standard Methodology. These changes have been made in Section 3.6.1.1 of the FEIR.

This station was not provided comprehensive modeling as part of the Project's analysis related to County General Plan Policy S-1 because it was clear, based on road miles alone, that it would not be able to respond to any of the Project site within the General Plan's 5-minute travel time standard. The response from Chula Vista Fire Station 8 was also estimated in the DEIR and the County agrees that the actual travel time to the western edge of the Project would be just over 2 minutes. Longer travel times from Chula Vista Station 8, including over 5-minute travel would be realized for approximately 60 percent of the Project site. Section 3.6.1.1 of the FEIR has been revised to indicate travel time to the Project entrance from Station 8 is between 2 and 2.5 minutes. (Also see Global Responses 3: Travel Time and Standard Methodology and 4: Fire Service Provision.)

**A-4-162** The County has determined that the term Project Site, as referenced in the Fire and Emergency Services Section of the DEIR includes all areas within the Project's boundaries; also see Global Response 3: Travel Time and Standard Methodology. Also see Responses to Comments A-4-176 and A-4-177 for call processing times and turnout/reflex times.

**A-4-163** The County has determined that the comment is referring to Chula Vista response goals prior to the recent adoption of a 5-minute travel time for 90 percent of call responses and was likely based on an assumption that the Project would be annexed into Chula Vista. If that were the case, then the fire response configuration may be different from that proposed under the current plan as it would evaluate the proximity of Chula Vista Fire Station 8 and whether it achieved Chula Vista standards. Because the Project is in an unincorporated area within the SDCFA jurisdictional area, and not in the City of Chula Vista, the adequacy of the emergency response to the Project is, in part, determined by the County General Plan Safety Element, which bases acceptance of the fire protection plan on satisfying the 5-minute travel time standard for an apparatus responding from the closest fire station that is legally obligated to respond, to the most remote parcel in a project site. A PFFP has been prepared for the Project and indicates that the Project can support an onsite fire station. For additional information, see Responses to Comments A-4-146 and A-4-156.

**A-4-164** The County acknowledges and appreciates the comment. However, the first part of the comment provides factual background information taken from the DEIR and does not raise any issue

concerning the adequacy of the DEIR. For that reason, the County provides no further response to this part of the comment.

The County disagrees with the second portion of the comment that the San Diego County General Plan Table S-1 standards would have a negative impact on the CVFD. SDCFA will be providing primary fire services to the Project site; therefore, CVFD will not be impacted.

The San Diego County General Plan Travel Time Standard found in Policy S-1 requires analysis of travel time for an apparatus responding from the closest fire station that is legally obligated to respond, to the most remote parcel in a project site. This standard applies to all projects and this standard assumes that emergency equipment is located at the designated fire station for the purpose of calculating travel time. This is a common assumption that most agencies use when analyzing travel time and response times in relationship to the criteria that may be found in a particular standard or policy.

This policy provides the legitimate basis for the responding fire agency to meet the standard as if it were a requirement. Delays associated with blocked roads or other impediments are not addressed in the General Plan. Delays associated with impediments, such as intersections and acceleration /deceleration etc., are addressed by using the friction coefficient in the travel time formula found in NFPA 1142 (also see Global Response 3: Travel Time and Standard Methodology).

Additionally, potential delays associated with obstructed fire access roadways are addressed in the County Consolidated Fire Code which requires minimum unobstructed road widths of 24 feet and additional improved road widths where parking along the roadways is contemplated. These provisions far exceed state model code requirements and state regulations. This is intended, in part, to minimize the potential for obstructions and the associated delays for emergency responders. The reference to the FPP indicating Chula Vista Fire Station 4 as one of the closest stations could not be found in the January 2015 FPP or Section 3.5 of the DEIR. The FPP mentions CV Fire Stations 8, 7, and 2.

Regarding the comment referring to 7 to 10-minute response: It is not necessary for 2nd due or any other engine to arrive within 7 total minutes (5 minutes travel) time. This comment appears to be referring to Chula Vista response goals and was likely based on an assumption that the Project would be annexed into Chula Vista. If that were the case, then the fire response configuration may be different from that proposed under the current plan.

The County agrees that emergency medical calls will be the dominant type of call from the Project site, as it is in most jurisdictions. However, there is no evidence to support the assertion that this will “create extended response times and unavailable times” beyond those found in any other community. Therefore, the County disagrees with that portion of the comment.

The County agrees that clarification to the DEIR and FPP regarding the 5-minute travel time standard applying only to the first arriving engine should be provided and Section 3.5 of the FPP will be amended.

The County acknowledges that there are potential situations where additional resources may be desirable. These situations occur for every fire agency from time to time. Historically, these occasional situations have led to the development of automatic and mutual aid agreements between jurisdictions to minimize the potential for service degradation, typically on the fringes of their operational area where it is not feasible or desirable to build new stations. However, there is no evidence provided to substantiate the development of Village 13 with an onsite fire station will

negatively impact Chula Vista fire resources (see Global Response 3: Travel Time and Standard Methodology).

- A-4-165** The County has determined that the detail requested is not required in a San Diego County Fire Protection Plan or in the County General Plan Policy S-1. This analysis is conducted as part of the development of the SDCFA Standards of Cover and Standard Response Plan (See Global Responses 1: Phase II RMP and 5: Determining Adequacy of Response/NFPA 170).
- A-4-166** Global Response 4: Fire Service Provision provides details that address this comment. The County has also determined that, based on the planned staffing, available apparatus, and included project design features, fire and emergency medical response will be sufficient for the entire Project.
- A-4-167** All personnel assigned to FS 34 will be either career CAL FIRE firefighters or SDCFA Reserve firefighters and all are required to meet NFPA Standard 1001, Firefighter Professional Qualifications; NFPA Standard 1051, Standard for Wildland Firefighting Personnel Professional Qualifications; and associated California State Fire Marshal's Office professional standards. Additionally, all Company Officers are required to meet NFPA 1021, Standard for Fire Officer Professional Qualifications, and Truck and USAR personnel are required to meet NFPA 1670, Standard on Operations and Training for Technical Search and Rescue. Also see Global Response 4: Fire Service Provision for details of planned staffing.
- A-4-168** For clarification, FS 34 will not be unstaffed for prolonged incidents and/or remote training. FS 34 will be a "must cover" facility. Any incident to which FS 34 responds, where commitment is anticipated to be 30 minutes or more, SDCFA will immediately trigger move up companies to provide coverage at FS 34. Move up coverage of FS 34 will also occur for any offsite training.
- A-4-169** The Type I engine company will participate in the strike team rotation; please see Response to Comment A-4-168 for move up and cover details. Therefore, the County disagrees that there may be an impact on the Chula Vista Fire Department's response models.
- A-4-170** The SDCFA maintains a 3:1 ratio of front line apparatus to reserve apparatus. The reserve fleet can be utilized, as needed, when fire apparatus maintenance and repairs are occurring or in the event of a call back scenario for any reason.
- A-4-171** The Resort Village Fire Station will include advanced life support (ALS) transport ambulance capabilities. Please refer to Global Response 4: Fire Service Provision for details of planned staffing. There are currently six transport ALS ambulances associated with the Zone II EOA, with move ups taking place on a regular basis. If simultaneous transports are necessary, the backup transport would be provided through the routine move up process. In addition, the Resort Village Fire Station will have engine company-based ALS capability.
- A-4-172** The proposed Project is within the Zone II EOA, and no EOA agreement will be needed established between the Village 13 EOA and the Chula Vista EOA regarding transport units. Mercy Ambulance (the current Zone 2 EOA EMS provider) is relocating an ALS transport ambulance unit at FS 34. This ambulance will be available for Project-related transport as well as for offsite transport, as needed (see Global Response 4: Fire Service Provision).
- A-4-173** The County concurs with the request for additional detail regarding the resources needed to serve the Project. Therefore, Section 5.0 of the FPP has been revised to include a description of

the planned response resources relied upon for FPP analysis and conclusions. Also see Global Response 4: Fire Service Provision.

**A-4-174** The County has determined the statement that 97.5 percent of call volume is non-fire related was inaccurate. However, the call volume data provided in the 2012 Chula Vista Fire Facility/Deployment Master Plan include call volume data for a 3-year period (2007 through 2009), and the average annual calls that are medical related equates to 83.4 percent of all calls. This is consistent with most fire agencies who routinely experience 85 percent of their call volume related to medical emergencies. The statistic provided in Section 3.6.2.1 of the FEIR has been revised to include 83.4 percent, replacing 97.5 percent.

**A-4-175** The County acknowledges and appreciates the comment. However, the first part of the comment provides factual background information taken from the DEIR and does not raise any issue concerning the adequacy of the DEIR. For that reason, the County provides no further response to this part of the comment.

The County disagrees with the second portion of the comment that the San Diego County General Plan Table S-1 standards would have a negative impact on the CVFD. See Response to Comment A-4-164.

**A-4-176** The County has determined that the dispatch time (call processing time) requirement is 80 seconds. This has been included in Section 3.6.2.1 of the FEIR.

**A-4-177** The County has determined that the turnout time (turnout/reflex time) requirement is 80 seconds. This has been included in Section 3.6.2.1 of the FEIR.

**A-4-178** The respective average times are not relevant to the Project's FPP preparation or approval. The County criterion for acceptable response is 5 minutes of travel time for an apparatus responding from the closest fire station that is legally obligated to respond, to the most remote parcel in a project site. This Project will be required to have an onsite station. See Global Response 5: Determining Adequacy of Response/NFPA 1710.

**A-4-179** The County has reviewed the FPP's response analysis, which provides response coverage areas from two potential onsite temporary stations and one permanent fire station site. The modeling used in the FPP is a GIS program called ESRI Network Analyst extension for ARC Map that analyzes road networks. The standard speed used was 35 mph and impedances were imposed at each intersection, which has the effect of slowing the travel time in much the same way as the NFPA and ISO formulas. The travel times are considered consistent with the NFPA and ISO formulas. Therefore, the modeling provided in the FPP and DEIR need not be updated. Also see Global Response 3: Travel Time and Standard Methodology.

**A-4-180** As requested in the comment, the response times listed in Section 3.6.1.2 of the DEIR have been updated to include more recent information from the County Sheriff's Department. These changes are reflected in the FEIR in Section 3.6.1.2. However, the County does not concur that the need for six additional officers would cause a direct and cumulative impact. As stated in Section 3.6.2.2, "A significant public services impact would occur if implementation of the Project would... [require or result] in the construction or expansion of law enforcement facilities." The environmental impacts associated with the construction of a County Sheriff's storefront have already been analyzed in the DEIR and therefore would not cause any additional significant impacts.

**A-4-181** The County does not concur with this comment. As explained in Response to Comment A-4-180, there would be no significant impacts to law enforcement caused by the Project, and therefore, no mitigation is required.

**A-4-182** Capacity data for the school districts in question were added to Section 3.6.2.3 and are included in the FEIR. There is no significant impact.

**A-4-183** Per the comment, text has been updated in Section 3.6.2.3 of the FEIR to clarify the analysis of potential impacts to schools.

**A-4-184** School sites generally are able to accommodate relocatable classrooms. This is not a CEQA issue requiring further response.

**A-4-185** The suitability of rock for use as construction material is not a CEQA impact issue and requires no response. Nevertheless, based on the County's laboratory testing program, the existing rock is suitable to be used for construction materials. See Appendix F of the Area A and Area Geotechnical Report, included as Appendices C-6 and C-7 of the FEIR for more detail on and specific results of the laboratory testing.

**A-4-186** DEIR page 2.7-9 and Table 2.7-6 depict the segment of Otay Lakes Road from Wueste Road to Project Driveway #1 as lying entirely within the County of San Diego; however, the segment from Wueste Rd and Driveway #1 is bisected by the City of Chula Vista/County line. Specifically, the portion of the segment located east of Wueste Road to the City/County boundary is within the City of Chula Vista, and the portion from the City/County boundary is within the County. The FEIR includes revisions to DEIR Table 2.7-6 and the corresponding text in Section 2.7.2.1 clarifying the appropriate jurisdictions of each portion of the segment.

Nonetheless, application of the City of Chula Vista's noise standards to the subject segment does not change the DEIR's conclusion that noise impacts will be less than significant. Thus, recirculation is not required. Specifically, under the City's noise standards, noise levels in excess of 65 dBA CNEL are incompatible with noise-sensitive land uses (see DEIR page 2.7-8). As shown in the EIR noise analysis, no noise-sensitive land uses are located near Otay Lakes Road between Wueste Road and Driveway #1 that would be subject to vehicle traffic noise in excess of this standard. (See, DEIR pp. 2.7-8 – 2.7-10.) Accordingly, even with application of the City's noise standards to this segment, potential impacts would remain less than significant.

**A-4-187** As disclosed in the DEIR, John Nichols Airfield is a private, restricted-use (daytime commercial skydiving) airfield. The DEIR analyzes the potential noise impacts associated with the airfield in the Existing Conditions (Subsection 2.7.1) and "Aircraft Noise" subsections of the EIR Noise Analysis (page 2.7-10 et seq. of the DEIR).

As discussed in DEIR Section 2.7.1.1, noise measurements primarily from jump plane takeoffs and flyovers were taken at the Project site boundary, nearest the westerly end of Runway 27, in the overhead path of jump plane takeoffs from the runway over Otay Lakes Road. A summary of the measurements is presented in DEIR Table 2.7-2, which shows the sound exposure levels (SEL) for the takeoff, flyover, and landing events. Based on the SEL, impacts from aircraft noise would be less than significant because no noise-sensitive land uses would be exposed to maximum daily aircraft operation noise levels greater than 60 dBA CNEL, the applicable noise standard.

**A-4-188** In addition to DEIR Section 2.7, Noise, which addresses potential noise impacts relative to John Nichols Airfield (see Response to Comment A-4-187, above), DEIR Section 2.6, Hazards and Hazardous Materials, and Section 3.3, Land Use and Planning, also address related compatibility issues.

As set forth in the Hazards analysis (see Sections 2.6.1.9 and 2.6.2.3 and Figure 1.0-13 of the DEIR), the Project would be affected only by aircraft activity at the western end of the airfield's primary runway; all takeoffs and landings are made from the east to the west. Accordingly, only takeoffs from the airfield's western end are of concern in conducting the compatibility analysis (because landings occur at the airfield's eastern end, such operations do not present a compatibility concern relative to the Project site). Additionally, once aircraft leave the ground during takeoff, the executed flight pattern immediately takes aircraft away from the Project site. (See DEIR page 2.6-16.)

With that context, the Hazards analysis determined that impacts related to airport hazards would be less than significant, which is consistent with (i) the substantial amount of "open land" within the airfield's vicinity that is available to accommodate aircraft in distress; (ii) the typical departure route utilized by aircraft operating at the airfield, which turn away from the Project site; and (iii) the type of operations conducted at the airfield, which either consist of aircraft operated by professional pilots for skydiving purposes or ultralight aircraft that are highly unlikely to pose a significant threat to on-the-ground conditions. (See DEIR page 2.6-19.) Therefore, no alteration of airport operations would be necessary due to the addition of residential and resort users nearby.

In addition, as set forth in Section 3.3, Land Use and Planning, in conjunction with public review of the DEIR, Project plans were submitted to the Federal Aviation Administration (FAA) for review and a compatibility determination regarding John Nichols Airfield. (See DEIR page 3.3-33.) Pursuant to the Otay Ranch General Development Plan Otay Subregional Plan, if it is determined by the FAA that incompatibilities exist between the Project and the existing airfield, then the Otay Ranch Sectional Planning Area (SPA) Plan is to be designed to avoid such interface impacts. The Project applicant would then revise the Project's phasing plan to allow use of the airfield until its option expires. (See DEIR Table 3.3-1.) At this time, no incompatibility issues have been identified and thus no revisions to the phasing plan are anticipated.

**A-4-189** See Responses to Comments A-4-187 and A-4-188.

**A-4-190** The County does not agree with this comment. The EIR discusses and analyzes energy use associated with water conveyance in Section 3.9. Additionally, Section 3.9 discusses aspects of the Project that ensure that energy is not being used inefficiently. According to the CalEEMod User's Guide, "The amount of water used and wastewater generated by a project has indirect GHG emissions associated with it. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. It will often be the case that the water treatment and wastewater treatment occur outside of the project area. In this case, it is still important to quantify the energy and associated GHG emissions attributable to the water use. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both methane and nitrous oxide." The program calculates total GHG emissions from wastewater treatment based on the region-specific distribution of wastewater treatment methods, which the end user can modify with project-specific data.

**A-4-191** The County does not concur with the recommendation made in this comment. The 1994 Salt Creek Basin Study, 2004 DIF update that was in effect at the time of the DEIR, and the construction of the Salt Creek Interceptor were all completed based on the inclusion of flows for



the unincorporated County Villages of 13, 14, & 15 and Planning Areas 16 & 19. In 2015, the City of Chula Vista approved the removal of County Villages sewer flows from their planning and proposed DIF update. Based on the planning done to date, the fee program currently in place, and the proximity of the Project relative to existing sewer facilities, it is reasonable, financially feasible, and most environmentally preferred to have the Salt Creek Interceptor as the proposed Project. The DEIR considered the Spring Valley Interceptor as an alternative but rejected it from further analysis.

**A-4-192** As stated in Section 3.7.2.2 of the DEIR, the Project will be part of the County Sanitation District annexation (which currently has Metro capacity) to serve the Project through a municipal service transportation agreement. This agreement has been agreed to and is being processed to allow sewer service via the Salt Creek Interceptor. It is acknowledged that the City of Chula Vista will be required to update the 2015 Salt Creek DIF to included County Villages and Planning Areas.

**A-4-193** Since this comment letter was submitted, the City of Chula Vista has executed a sewer transportation agreement with the County of San Diego to allow connection to the Salt Creek Interceptor for unincorporated Villages and Planning areas, including Village 13. This action makes feasible the Project proposal to utilize the Salt Creek Interceptor, which is fully analyzed in the DEIR. Additional information on this can be found in Appendix C-30 of the FEIR.

**A-4-194** See Response to Comment A-4-193.

**A-4-195** The County declines to implement the suggested revision. The City of Chula Vista limit line is not the appropriate location to require a change in design criteria. All sewer facilities that are to be operated and maintained by the County of San Diego, including sewer force mains in City of Chula Vista public right-of-way, will be designed to County of San Diego Standards. Since both the City of Chula Vista and County of San Diego require dual force mains and use the same pipe materials for sewer lines, the sewer lines will meet or exceed City of Chula Vista requirements.

**A-4-196** Per the comment, an updated cumulative sewer study analysis was prepared using the City of Chula Vista Master Plan Modeling software, and using updated land use projections and sewer generation factors. This analysis was summarized in a memorandum dated March 25, 2015. The results of this analysis confirm that the Salt Creek Interceptor has been sized to accommodate ultimate development in the service area, including the proposed Project. The results of this updated analysis have been included in the FEIR as Appendix C-30.

**A-4-197** The County concurs with this comment. The text referring to Section 3.7.5.2 has been changed to correctly reference Section 3.7.1.2 in the FEIR.

**A-4-198** The County does not concur with the recommendation made in this comment. Onsite facilities are to be operated and maintained by the County of San Diego Sanitation District and have been analyzed using County criteria. Since the Project proposes to convey flows to the Salt Creek Interceptor, the total flows and EDUs from the Project using City of Chula Vista criteria were also provided. The Sewer Study provided as Appendix C-16 to the DEIR provides this information and it was also used in the March 25, 2015, analysis of the Salt Creek Interceptor.

**A-4-199** The County does not concur with the recommendation made in this comment. The onsite sewer system is proposed to be operated and maintained by the County of San Diego Sanitation District and the peaking factors per County requirements have been used accordingly.

**A-4-200** The City of Chula Vista, as a condition of the approved Salt Creek Sanitation Agreement, will have to update the 2015 DIF program and fees as necessary to include the unincorporated Villages and Planning Areas, including Village 13.

**A-4-201** The County does not concur with all of the recommendations made in this comment as clarified below. The City of Chula Vista limit line is not the appropriate location to require a change in design criteria. All sewer facilities that are to be operated and maintained by the County of San Diego, including sewer force mains in City of Chula Vista public right-of-way, will be designed to County of San Diego Standards. Since both the City of Chula Vista and County of San Diego require dual force mains and use the same pipe materials for sewer lines, it is believed that the sewer lines will meet or exceed City requirements.

It is acknowledged that the Project may be conditioned to line City of Chula Vista manholes downstream of the force main discharge point during final engineering for the Project.

**A-4-202** The County concurs with this comment. Page 5-2 of the Sewer Study provided as Appendix C-16 to the DEIR indicates that overflow storage volumes at Lift Stations 1 and 2 will include capacity for both gravity and pumped flows. The DEIR has been updated to include this discussion and revised storage volumes.

Regarding protection against failure, the overflow storage volumes have already been oversized from a typical 2-hour storage requirement to 6 hours of storage for sensitive sites. All other reasonable precautions in accordance with industry standards and County of San Diego requirements will be incorporated into the final design of the station to reduce the chance for failure of the station.

**A-4-203** The County understands the concerns related to Project water supply presented in this comment. The January 2014 Water Supply Assessment and Verification study was prepared and approved by OWD in January 2014 and is provided as Appendix C-18 to the DEIR. This study was based in large part on the water supply documents that were, and currently still are, in effect to guide water supply planning. These include the 2010 Urban Water Management Plans prepared by OWD, SDCWA, and MWD that are updated every 5 years. It needs to be understood that a water supply assessment and verification report is not a guarantee that a project will be supplied with water, but rather a finding that it is reasonable to anticipate that water will be available to supply a project based on long range supply and demand projections.

Because the water supply conditions in California can and have changed based on drought conditions and legislative decisions by the State, Section 3.7.1.1 of the FEIR has been updated to include a discussion of the current drought conditions and impact on the proposed Project. Please see the December 2015 Memorandum included as an attachment to Appendix C-18 of the FEIR for additional information. The Final EIR also includes environmental design considerations UT-ED-1 through 8 which provide for water efficiency of the project.

**A-4-204** The County does not believe a discrepancy exists. The Overview of Water Service specifically says that, in 2008, MWD provided 71 percent of the SDCWA supply, whereas, in 2013, MWD supplied the 46 percent of the region's water needs, as stated in the SDCWA 2013 Annual Report. Therefore, the DEIR was using current statistics at the time the document was written. The EIR has been updated to include the date of the statistic.

**A-4-205** Because the short-term water supply conditions in California can and have changed based on drought conditions and legislative decisions by the State, the DEIR has been updated to include a

discussion of the current drought conditions and impact on the proposed Project. Please see the December 2015 Memorandum included as an attachment to Appendix C-18 of the FEIR for additional information.

**A-4-206** The County is aware of the concern related to current water supply conditions for this and other proposed Projects. OWD has a drought response plan similar to SDCWA, but is not required to follow the SDCWA drought response requirements precisely. For example, SDCWA could declare a Drought Level 2, but OWD may elect to impose Drought Level 1 conditions on its customers and still be able to meet their obligations as a member agency of SDCWA. Part of the reason that OWD can do this is that they are not 100 percent reliant on SDCWA for water. OWD adopted a New Water Supply Fee program in 2010 that all new developers are required to participate in, and the purpose of this program is to diversify the OWD supply through groundwater projects, desalination projects, and the like.

The Water Supply Assessment and Verification report prepared and approved by OWD for the Project is not a guarantee that water will be supplied to the Project, but rather a finding that it is reasonable to conclude that water will be available to serve the Project based on long-term planning. Like any project, the supply of water in the short term may be affected by increasing drought conditions and the corresponding drought level response adopted by OWD, including the potential impact on issuance of new meters, if applicable.

**A-4-207** Please see Response to Comment A-4-203.

**A-4-208** The comment does not address the adequacy of the DEIR's impact analysis, so no further response is required. Nevertheless, the County has updated references to historical water use in Section 3.7 of the FEIR, as appropriate. According to SDCWA, current water usage in the San Diego region has decreased by 12 percent from 1990 to 2013 even though over 700,000 residents have been added to the area over that time frame.

**A-4-209** Please see Response to Comment A-4-205.

**A-4-210** The City of San Diego does not allow the use of recycled water on projects that are tributary to their reservoirs. Rolling Hills Ranch Phase 3 and Eastlake are two examples of existing projects that were not allowed to use reclaimed water for irrigation in these areas. The proposed Project approached the City of San Diego several times regarding the use of recycled water, and the City has consistently voiced opposition to its use. OWD, who is the purveyor of potable and recycled water in the area, also does not identify the use of recycled water as a means of supplying water for this Project or other projects in the drainage basin for the Otay Reservoirs.

**A-4-211** Please see Response to Comment A-4-205.

**A-4-212** As stated in the DEIR, OWD evaluated the reservoir's impacts in the FEIR for OWD's Water Resources Master Plan (2009). The reference to the OWD FEIR is provided for analysis of the overall water system. The Project does not rely upon the OWD FEIR for any Project-related impact analysis. The construction of the onsite reservoir is included in the overall environmental analysis for the Project (see DEIR Sections 2.2, 2.3, 2.4, and 2.7). This analysis identifies potential impacts to air quality (from construction); biological and cultural/paleontology resources; and noise with associated mitigation. The County disagrees the analysis for construction of the reservoir must be separate from the overall analysis of the Project; rather, it is incorporated in the overall environmental analysis for the Project.

**A-4-213** Please refer to Response to Comment A-4-212. In addition, as stated in Section 3.7.2.1 of the DEIR, “construction of such facilities would not have any additional impacts beyond those identified in this EIR.” The comment also requests that the County disclose the party responsible to construct the water facilities, which is not information required by CEQA. This comment relates to a general inquiry and does not raise any new issue or make any new substantive comment concerning the adequacy of the DEIR; for that reason, the County provides no further response to this comment.

**A-4-214** The comment does not address the adequacy of the DEIR, so no further response is required.

**A-4-215** The County feels that the water conservation goals presented at this stage of the planning process are appropriate. The water conservation plan included as Appendix VI of the Resort Village Specific Plan, the findings of which are summarized in the Appendix C-17 study, are goals for the Project and not mandatory requirements that require specific mitigation measures to demonstrate how they will be achieved. Like any other project, this development will be required to comply with mandatory water conservation measures outlined by the State and County that are in effect at the time development occurs, but may also set goals that go beyond these requirements (such as the reduction of outdoor water use by 30 percent). It is important to note that the Water Supply Assessment and Verification Report prepared for the Project by OWD was based on standard water demand factors that do not require a 30 percent reduction in outdoor water use. Therefore, the finding by OWD that adequate supplies are expected to be available for the Project is not contingent on the Project demonstrating that the Project can reduce outdoor water use by 30 percent.

**A-4-216** The water supply planning has been done in accordance with required State standards as outlined in Senate Bills 610 and 221. The water supply analysis is based on the 2010 Urban Water Management Plans, which in turn rely on SANDAG data. The UWMP documents are updated every 5 years and are prepared based on a 20-year planning window. Similarly, the water supply assessment and verifications are required to be prepared based on a 20-year planning window.

**A-4-217** Please see Response to Comment A-4-203. The DEIR relied upon the most recent water supply data, the 2010 UWMP.

**A-4-218** The County concurs with this comment and has revised the FEIR. References to a water supply offset program are outdated and have been removed from Section 3.7.2.1 of the FEIR. OWD implemented a New Water Supply Fee Program in 2010 that takes the place of the previous offset program. As stated in Section 3.7.2.1 of the DEIR, it was determined that adequate water supply is available to meet the demands of the proposed Project from existing OWD entitlements and water resources. Therefore, removal of the offset program does not alter the EIR’s conclusion that impacts to water supply will be less than significant.

**A-4-219** The Project does not propose the use of recycled water onsite. Due to discussions with the City of San Diego regarding the use of recycled water within watersheds tributary to surface water storage reservoirs, the proposal to use recycled water within the Project has been eliminated. The comment questions the decision of the City of San Diego as the owner/operator of the Lower Otay Reservoir. This comment does not raise any new issue or make any new substantive comment concerning the adequacy of the DEIR; for that reason, the County provides no further response to this comment.

**A-4-220** The County concurs with this comment. The requested text was added to Section 3.6.1.4 of the FEIR. For a discussion of proposed trails, see Response to Comment A-7-1.

- A-4-221** As indicated in the DEIR in Section 2.4.2 and provided in Chapter 5.0, List of References, the County of San Diego Cultural Resources and Paleontological Resources Guidelines were used to conduct the significance evaluations of archaeological and historic sites and paleontological resources within the Otay Ranch Village 13 property or within any offsite improvements. In response to this comment, the FEIR has been revised to insert “San Diego” before County Guidelines for Determining Significance (see FEIR Section 2.4.2). Chapter 5.0, List of References, correctly cites these Guidelines.
- A-4-222** The County has completed its Senate Bill 18 (SB 18) consultation as part of the planning and environmental review process for the proposed project. County staff met with Santa Ysabel and identified that the project will be conditioned with archaeological monitoring, temporary fencing, data recovery and open space. As a result, consultation was concluded with Santa Ysabel. All other tribal correspondence (Pala, Pauma, Rincon) deferred to southern tribes. The County remains receptive to additional consultation or coordination among all interested parties and local tribes.
- A-4-223** Neither CEQA nor County of San Diego guidelines stipulate any percentage of cultural resources that should be preserved as part of any Project approval process. The point of the passage in Sections 2.4.2.5 of the DEIR is that the preservation of various types of cultural resources will provide a benefit to the inventory of archaeological sites outside of the area of potential impacts. However, as this can cause confusion, this sentence will be removed from the FEIR. Site significance is based on the evaluation conducted for each site. The governing documents include CEQA, County Guidelines, the County’s Local Register, the State Historic Register, the federal Historic Register, and the County RPO. Sites that are determined “not significant” or “less than significant” do not require mitigation. Sites that are not evaluated are assumed both CEQA and RPO significant and must be preserved. The data recovery program for Otay Ranch Village 13 was based upon the County of San Diego’s Guidelines for Determining Significance of Cultural Resources – *Section 5.0: Standard Mitigation and Design Considerations*. Chapter 10.0 of the cultural study provides the details of the Data Recovery Program.
- A-4-224** The County disagrees with the comment. DEIR Chapter 4.0 discusses the rationale for selection of Project Alternatives in accordance with Section 15126.6(b) of the CEQA Guidelines, which requires the selection of alternatives that avoid or substantially lessen significant impacts of the Project. The DEIR further stated after the implementation of mitigation measures the proposed Project would result in significant impacts to aesthetics, air quality, and solid waste disposal. The County agreed to the alternatives chosen to minimize the above significant impacts by reducing the development footprint and reducing the density and intensity of the Project. DEIR Table 4.0-1 – *Comparison of Alternatives to Proposed Project* summarizes the lessening of impacts to aesthetics, air quality, and solid waste disposal for a reasonable range of alternatives selected for analysis. It should be noted, however, that Chapter 4.0 of the EIR was recirculated in 2019 to include a new alternative, Alternative H, in response to discussion with the Wildlife Agencies. For additional information, see the updated Chapter 4.0 of the 2019 Recirculation Package or the FEIR.
- A-4-225** The County disagrees with the comment that the analysis of Fire and Emergency Services is not adequate. For more information, see Responses to Comments O-15-2, O-15-11, and A-7-20. Regarding the Alternatives analysis, the DEIR discusses the manner in which the various alternatives were selected and rejected, and also evaluates the alternatives for their potential to

reduce the Project's significant impacts. Regarding the Salt Creek Interceptor, see Response to Comment A-4-193.

**A-4-226** The Spring Valley Interceptor is no longer required as a Project Alternative and was rejected from further environmental analysis as stated in Section 4.1.2.3. Use of the Spring Valley Interceptor would not reduce potential impacts of the proposed Project and would also be a more costly alternative to the Salt Creek Interceptor. Therefore, the Spring Valley Interceptor alternative does not need additional analysis in the EIR. See Response to Comment A-4-193.

**A-4-227** The County disagrees that an alternative requiring annexation to the City of Chula Vista is required. It is worth noting that the EIR did not identify the Project's impacts on Sewer Service or Fire/Emergency Services as significant and unmitigated. There will be an out of service area agreement or other method between the City of Chula Vista and the County for any services to be provided by the City. Because of this, annexation would not be required to provide City of Chula Vista services to the Project site, and it is not necessary to analyze annexation as a Project alternative, as impacts would not be reduced.

**A-4-228** The County acknowledges and appreciates this comment, but there is no CEQA requirement that alternatives be given descriptive names. The alternatives are summarized in Section 4.1.1, Table 4.0-1, Table 4.0-2, and the figures provided in Chapter 4.

**A-4-229** Table 4.0-2 is intended to show air quality impacts of Alternative G prior to mitigation. Therefore, no changes to this table have been made. However, changes have been made to the text in Section 4.8.2 of the FEIR under the Air Quality heading to indicate the appropriate mitigation for Alternative G.

**A-4-230** The comment expresses the opinion of the commenter regarding the selection of the preferred alternative. The comment includes a discussion of the requirements of the Board of Supervisors to certify the FEIR and the selection of the Project for approval. The discussion of Project and alternatives feasibility will be included in the Statement of Overriding Considerations and Findings of Fact for the Project prior to consideration by the Board of Supervisors.

**A-4-231** The EIR analyzes, and the County has considered, a reasonable range of alternatives to the Project. There is no requirement that the County also consider a gravity sewer alternative, as suggested in the comment.

**A-4-232** See Response to Comment A-4-61.

**A-4-233** See Response to Comment A-4-61.

**A-4-234** An updated cumulative sewer study analysis was prepared using the City of Chula Vista Master Plan Modeling software and updated land use projections and sewer generation factors. This analysis was summarized in a memorandum dated March 25, 2015. The results of this analysis confirm that the Salt Creek Interceptor has been sized to accommodate ultimate development in the service area, including the proposed Project. The results of this updated analysis have been included in the FEIR. No new significant impacts are identified in the updated analysis, and therefore recirculation is not required.

**A-4-235** See Response to Comment A-4-234.

**A-4-236** See Responses to Comments A-4-61 and A-4-234.

**A-4-237** See Response to Comment A-4-61.

**A-4-238** The source of the referenced table, DEIR Table 1.0-6, is TIA Table 7.1, Approved/Pending Projects in East Otay Mesa. Table 7.1 lists only a portion of the cumulative projects included in the traffic model; it is not intended to depict the full list of included projects.

As explained in Section 7 of the TIA, SANDAG’s Series 11 Year 2025 Transportation Model was utilized in the traffic impact analysis to forecast cumulative (Year 2025) traffic volumes. The model was originally developed by SANDAG for the Otay Ranch Village Two Comprehensive SPA Amendment project.

SANDAG utilized the Otay Ranch Village Two model as the base in developing the Resort Village/Village 13 model. Future/planned land uses (i.e., cumulative projects) that were included in the model for all areas within the City of Chula Vista, with the exception of the Village Two land uses, were provided directly to SANDAG by City of Chula Vista staff (staff person Dai Hoang) to ensure completeness. The land uses provided to SANDAG by the City of Chula Vista included all of the Otay Ranch Villages, as well as all other growth forecast by the City of Chula Vista for all areas within the City.

For areas outside the City, the Resort Village/Village 13 traffic engineer provided the land uses for the proposed Project to SANDAG, and also coordinated with the County and City of San Diego to determine the cumulative projects to be included in the model from each respective jurisdiction. SANDAG utilized regional land use assumptions for the remaining cumulative projects.

Thus, the transportation model utilized for the Resort Village/Village 13 traffic analysis included all cumulative projects within the City of Chula Vista as provided directly to SANDAG by City staff. As a result, the traffic engineer does not have the names of the individual City of Chula Vista cumulative projects included in the model to revise TIA Table 7.1 as requested by the comment. However, the land use inventory for the 2025 model from SANDAG, which includes all future/planned land uses within the City of Chula Vista listed on a “bulk” basis, as well as the future/planned land uses for all other cumulative projects considered in the traffic model, has been added to Appendix F and provided in the FEIR.

**A-4-239** Please see Response to Comment A-4-238.

**A-4-240** The mitigation measures identified under the “Existing Plus Project” scenario were not carried forward into the Cumulative scenario analysis (i.e., were not assumed implemented by that time) in order to provide a conservative assessment of impacts associated with the proposed Project.

Additionally, the County of San Diego considers the mitigation triggers derived under the “Existing Plus Project” analysis scenario as the actual triggers for mitigation. In comparison, the cumulative analyses are used to identify significant impacts taking into account all cumulative Project traffic. Triggers are not derived under the cumulative analyses because mitigation for significant impacts to County roads under this scenario is payment of the County’s TIF, which occurs at a fixed time relative to building permit issuance. Thus, no triggers are assigned for cumulative impacts under the County methodology.

**A-4-241** This comment is a duplicate of Comment A-4-238. Please see Response to Comment A-4-238.

**A-4-242** This comment is a duplicate of Comment A-4-239. Please see Response to Comment A-4-239.

**A-4-243** This comment is a duplicate of Comment A-4-240. Please see Response to Comment A-4-240.

**A-4-244** The County acknowledges and appreciates this comment. As stated in the comment, the findings in the DEIR are supported with substantial evidence. Therefore, the County provides no further response to this comment.

**A-4-245** The DEIR concludes impacts to aesthetic and visual resources to be significant and unmitigable; therefore, the Project does not rely upon the County General Plan Update (GPU) FEIR (2011) to reduce impacts to below a level of significance. Additionally, mitigation measures identified in the County GPU EIR are not applicable at the individual project level. Further, the mitigation in the County GPU EIR does not reduce all potential impacts identified in the County GPU EIR to a level of less than significant.

**A-4-246** The County concurs with this comment. The text was updated in Section 2.8.3 of the FEIR to reflect the approval of the Village Two Comprehensive SPA Plan Amendment and the University Villages projects. Note, however, that the addition of these projects does not change the conclusion of a significant and unavoidable cumulative solid waste disposal impact.

**A-4-247** The Otay Landfill is discussed from a local perspective, but, the analysis for solid waste capacity is viewed on a regional basis. The recommendation to analyze alternative solid waste disposal sites is not within the control of the Project applicant but rather lies within the authority of the County of San Diego.

**A-4-248** As stated in Section 2.2.1 of the DEIR, “The proposed development is located in the San Diego Air Basin (SDAB), which is contiguous with San Diego County.” For the purpose of the cumulative impact analysis for air quality, for regional nonattainment pollutants, the geographic scope of the cumulative analysis includes the San Diego Air Basin. No changes to the EIR have been made.

**A-4-249** Subsequent to the public comment period for the DEIR, the City of Chula Vista has signed a Development and Cooperation Agreement with the Project applicants to allow implementation of mitigation measure M-TR-9, which involves the installation of a traffic signal or roundabout at Otay Lakes Road and Wueste Road. This agreement is included in Appendix D-19.

**A-4-250** To provide clarification per the comment, the EIR has been revised to state “The Otay Ranch, as defined by the Otay Ranch RMP, including the Project site, is achieving a 97.8 percent conservation ratio of vernal pools as evaluated by using current, project level vernal pool data.”

**A-4-251** The County disagrees with the suggested addition to the cumulative projects list of undeveloped land within the City of Chula Vista. The County provided the required list of cumulative projects for analysis in the DEIR. The list includes County jurisdiction projects that are within the County MSCP Subarea that are considered to be past, present, or foreseeable future projects.

**A-4-252** As stated in Section 2.5.5 of the EIR, the “mitigation measures would be implemented in compliance with the Conclusions and Recommendations of the Project Geotechnical Reports.” Additionally, it is stated throughout Section 2.5 that the Project would be implemented in compliance with the recommendations and requirements in the Geotechnical Reports.

**A-4-253** The County concurs with this comment. Text has been revised in Section 2.6.4 of the FEIR.



**A-4-254** The County disagrees that implementation of the FPP and mandatory Project compliance with applicable existing fire codes are inadequate to reduce the potential from wildland fires to below the level of significance. The comment presumes a need for City of Chula Vista resources in such an event. However, the comment provides no basis for that conclusion. These comments do not raise any new issue or make any new substantive comment concerning the adequacy of the DEIR; for that reason, the County provides no further response to this comment.

**A-4-255** The County concurs with this comment that the cumulative analysis focuses on the construction of a public safety site. However, this is in line with the Guidelines for the Determination of Significance in Section 3.6.2.2 of the DEIR which states: "A significant public services impact would occur if implementation of the Project would... [require or result] in the construction or expansion of law enforcement facilities in order to maintain acceptable service ratios, response times, or other performance standards, the construction of which could cause significant environmental effects." This threshold is based on Appendix G of the CEQA Guidelines. Because it was found in the project level-impact analysis that the Project would require the construction of a new public service facility due to the need for additional staff, the need for additional personnel does not need to be restated, and Section 3.6.3.2 may focus on impacts due to the construction of the new facility.

**A-4-256** The County concurs with the comment on the correction of the table reference. Text in Section 3.7.3.4 of the FEIR has been updated to reflect the correct table reference. Because the DEIR already evaluated the Project's impacts on energy supply (Sections 3.9.1 and 3.9.2) and determined that those impacts are insignificant from both a project-level perspective and a cumulative perspective, no further analysis is required.

**A-4-257** The County has determined that the water supply planning has been done in accordance with required State standards as outlined in Senate Bills 610 and 221. The water supply analysis is based on the 2010 Urban Water Management Plans, which in turn rely on SANDAG data. The UWMP documents are updated every 5 years and are prepared based on a 20-year planning window. Similarly, the water supply assessment and verifications are required to be prepared based on a 20-year planning window.

**A-4-258** The County is aware of the concern related to current water supply conditions for this and other proposed Projects. The January 2014 Water Supply Assessment and Verification study was prepared and approved by OWD in January 2014 and is provided as Appendix C-18 to the DEIR. This study was based in large part on the water supply documents that were and currently still are in effect to guide water supply planning. Namely, these are the 2010 Urban Water Management Plans prepared by OWD, SDCWA, and MWD that are updated every 5 years; they were updated in 2015. It needs to be understood that a water supply assessment and verification report is not a guarantee that a project will be supplied with water, but rather a finding that it is reasonable to anticipate that water will be available to supply a project based on long range supply and demand projections. As far as the question of what supplies are planned for development and what the likelihood is that those projects will be implemented, those details are provided in the OWD and SDCWA UWMPs. As an example, the Carlsbad desalination project was identified in the 2015 UWMPs, which came online in 2015. The project delivers 50 million gallons of water per day to northern San Diego County. This project alone represents a new supply that is capable of providing approximately 10 percent of the total water supply needs of San Diego County.

Because the short-term water supply conditions in California can and have changed based on drought conditions and legislative decisions by the State, the DEIR will be amended to include a discussion of the current drought conditions and impact on the proposed Project.

- A-4-259** The comment requests that the OWD offset program be included as an appendix to the FEIR. The Project is required to participate in the development of OWD alternative water supply project(s), which can be achieved by the payment of the New Water Supply Fee adopted by the OWD Board in May 2010. The County disagrees the FEIR is required to include the development impact fee program of OWD as part of the environmental document.
- A-4-260** The list of projects considered in the cumulative analysis is provided in Table 1.0-6. See Response to Comment A-4-257.
- A-4-261** See Responses to Comments A-4-10 and A-4-212.
- A-4-262** The range of alternatives evaluated in the DEIR is sufficient under CEQA. The County is not required to consider every alternative suggested by commenters. There is no need to update the DEIR.
- A-4-263** The comment relates to the statutes governing annexation of territory and does not address the adequacy of the DEIR's environmental analysis. Therefore, no response is required.
- A-4-264** See Response to Comment A-4-263.
- A-4-265** See Response to Comment A-4-263.
- A-4-266** The Comment does not address the adequacy of the DEIR; for that reason, no further response is needed or required.
- A-4-267** The County appreciates the comment's explanation of LAFCO's MSR process. As noted in the comment, LAFCO's analysis thus far is consistent with the County's will-serve letter, the "Overview of Sewer Service for the Otay Ranch Resort Village" report, and the DEIR's analysis of service from the Salt Creek Interceptor. However, because the comment does not present any issue or make any substantive comment about the adequacy of the DEIR, no further response is needed or required.
- A-4-268** The County acknowledges and appreciates the comment. As these comments are specific to the Fiscal Impact Analysis and do not raise any new issue or make any new substantive comment concerning the adequacy of the DEIR, the County provides no further response to this comment.
- A-4-269** The County acknowledges and appreciates the comment. However, the comment provides concluding remarks and does not raise any new issue or include any new substantive comment concerning the adequacy of the DEIR. For that reason, the County provides no further response to this comment.

Attachment A4.1



# Memorandum

To:	County of San Diego	From:	Valorie Thompson
	Health Effects of Criteria Pollutants		
Re:	Otay Ranch Village 13	Date:	February 1, 2020

☐ Urgent    ☐ For Review    ☐ Please Comment    ☐ Please Reply    ☐ Please Recycle

## Purpose of this Memorandum

This Technical Memorandum addresses Comments A-4-9 and RO-6-108 and 109 from the Endangered Habitats League letter dated May 28, 2019. The comments therein state that the proposed Otay Ranch Resort Village Project (Proposed Project) is located within the San Diego Air Basin (SDAB), which is classified as a nonattainment area for the federal ozone standard and a serious nonattainment area for the California ozone standard. The SDAB is also classified as a nonattainment area for PM<sub>10</sub> and PM<sub>2.5</sub>. As stated in the comment, the 2015 Draft EIR (DEIR) evaluated emissions against the County's adopted screening thresholds for air quality, and concluded that emissions of VOCs, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> would exceed the thresholds during construction, and emissions of VOC, CO, and PM<sub>10</sub> would exceed the thresholds during operations. (The 2015 DEIR identified VOCs and NO<sub>x</sub> as ozone precursors.) Following an evaluation of mitigation options, the 2015 DEIR concluded that air quality impacts would be significant and unavoidable, as emissions could not be feasibly reduced below the thresholds. Nevertheless, the comment states that the analysis in the 2015 DEIR is insufficient because it does not explain the nature and magnitude of the Project's air quality effects.

In response to these comments, and pursuant to the California Supreme Court's decision in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 (Friant Ranch decision), this Memorandum addresses the potential for adverse health effects

related to emissions of criteria air pollutants associated with construction and operation of the Proposed Project, based on scientific information and technological methods available at the time of this Memorandum's preparation.

The Friant Ranch decision (issued December 24, 2018, well after circulation of the 2015 DEIR) addresses the need to correlate mass emission values for criteria air pollutants to specific health consequences, and contains the following direction from the California Supreme Court: "The EIR must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must explain what the agency *does* know and why, given existing scientific constraints, it cannot translate potential health impacts further." (*Sierra Club*, 6 Cal.5th at 521 (emphasis in original).)

As discussed below, at the time of this Memorandum's preparation, no quantitative methods have been demonstrated to reliably and meaningfully translate the mass emission estimates for the criteria air pollutants resulting from the Proposed Project to specific health effects. To date, only the Sacramento Metropolitan Air Quality Management District has issued interim recommendations on addressing the Friant Ranch decision.<sup>1</sup> Air agencies throughout the state are working on an approach to address potential health effects, and both the Sacramento Metropolitan Air Quality Management District and the South Coast Air Quality Management District are considering developing a tool to evaluate the potential for specific health effects. At this time, however, no such tool is available within the state.

As background, the 2015 DEIR provided an analysis of impacts to air quality in Section 2.2 and Appendix C-1 that accorded to standard CEQA practice at the time of its preparation. This Technical Memorandum utilizes information provided in the 2015 DEIR, but also contains additional information that has been developed to reflect the current state of the science.

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<sup>1</sup> In July 2019, SRA researched whether the following agencies have published any guidance to address the Friant Ranch decision: San Diego Air Pollution Control District; South Coast Air Quality Management District; Imperial County Air Pollution Control District; San Joaquin Valley Air Pollution Control District; Bay Area Air Quality Management District; California Office of Planning and Research; California Air Pollution Control Officers Association, and Sacramento Metropolitan Air Quality Management District. Only the Sacramento Metropolitan Air Quality Management District had issued interim recommendations as of the date of this Technical Memorandum.

Of relevance to this Memorandum, the interim recommendations from the Sacramento Metropolitan Air Quality Management District state that "there is currently no methodology to determine the impact of emissions on concentration levels in specific geographic areas," and that "neither the Sac Metro Air District nor any other air district currently have methodologies that would provide Lead Agencies and CEQA practitioners with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions." (SMAQMD 2019.)

## National and California Ambient Air Quality Standards

As discussed in the 2015 DEIR, Section 2.2 and Appendix C-1, and the 2015 Technical Memorandum, national and state ambient air quality standards (commonly referred to as the NAAQS and CAAQS) have been established by the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) for criteria pollutants, including ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), particulate matter (PM) with an aerodynamic diameter equal to or less than 10 microns (PM<sub>10</sub>), and PM with an aerodynamic diameter equal to or less than 2.5 microns (PM<sub>2.5</sub>). These standards are set at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety. Accordingly, elevated levels of criteria air pollutants as a result of a project's emissions could cause adverse health effects.

As stated in the 2015 DEIR, "The Federal Clean Air Act (CAA) requires the adoption of National Ambient Air Quality Standards (NAAQS) to protect the public health, safety, and welfare from the known or anticipated effects of air pollution. The NAAQS are revised when scientific evidence indicates a need. Current standards are set for sulfur dioxide (SO<sub>2</sub>), CO, nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and lead (Pb). These pollutants are collectively referred to as criteria pollutants. The California Air Resources Board (ARB) also established standards for these criteria pollutants (California Ambient Air Quality Standards [CAAQS]). The ARB standards are generally more restrictive than the NAAQS. The ARB also established standards for additional pollutants." (2015 DEIR, p. 2.2-2.)

The NAAQS and CAAQS for O<sub>3</sub>, NO<sub>2</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are presented in Table 1. Hydrogen sulfide, vinyl chloride, sulfates, and visibility reducing particles are not addressed further in this evaluation because they are not routinely associated with land use development projects subject to CEQA review, and are thus not presented in Table 1.

**Table 1 – National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	National <sup>a</sup>		California <sup>b</sup>
		Primary <sup>c, d</sup>	Secondary <sup>c, e</sup>	Concentration <sup>c</sup>
Ozone	1 hour	—	Same as primary standard	0.09 ppm (180 µg/m <sup>3</sup> )
	8 hour	0.070 ppm (137 µg/m <sup>3</sup> )		0.070 ppm (137 µg/m <sup>3</sup> )
Respirable particulate matter	24 hour	150 µg/m <sup>3</sup>	Same as primary standard	50 µg/m <sup>3</sup>
	Annual arithmetic mean	—		20 µg/m <sup>3</sup>
Fine particulate matter	24 hour	35 µg/m <sup>3</sup>	Same as primary standard	No separate state standard
	Annual arithmetic mean	12.0 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>
Carbon monoxide	8 hour	9 ppm (10 mg/m <sup>3</sup> )	None	9.0 ppm (10 mg/m <sup>3</sup> )
	1 hour	35 ppm (40 mg/m <sup>3</sup> )		20 ppm (23 mg/m <sup>3</sup> )
	8 hour (Lake Tahoe)	—	—	6 ppm (7 mg/m <sup>3</sup> )
Nitrogen dioxide	Annual arithmetic mean	0.053 ppm (100 µg/m <sup>3</sup> )	Same as primary standard	0.030 ppm (57 µg/m <sup>3</sup> )
	1 hour	0.100 ppm	None	0.18 ppm (339 µg/m <sup>3</sup> )
Sulfur dioxide	Annual arithmetic mean	0.030 ppm (80 µg/m <sup>3</sup> ) <sup>h</sup>	—	—
	24 hour	0.14 ppm (365 µg/m <sup>3</sup> ) <sup>h</sup>	—	0.04 ppm (105 µg/m <sup>3</sup> )
	3 hour	—	0.5 ppm (1,300 µg/m <sup>3</sup> )	—
	1 hour	75 ppb (196 µg/m <sup>3</sup> )	—	0.25 ppm (655 µg/m <sup>3</sup> )
Lead <sup>f</sup>	30-day average	—	—	1.5 µg/m <sup>3</sup>
	Calendar quarter	1.5 µg/m <sup>3</sup>	Same as primary standard	—
	Rolling 3-month average <sup>g</sup>	0.15 µg/m <sup>3</sup>		—

Notes: mg/m<sup>3</sup> = milligrams per cubic meter; PM<sub>2.5</sub> = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM<sub>10</sub> = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter.

<sup>a</sup> National standards (other than those for ozone and particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than 1. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. Environmental Protection Agency for further clarification and current federal policies.

<sup>b</sup> California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM<sub>10</sub>, PM<sub>2.5</sub>,—are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

Source: CARB 2019a

<sup>c</sup> Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

<sup>d</sup> National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

<sup>e</sup> National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>f</sup> The California Air Resources Board has identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

<sup>g</sup> National lead standard, rolling 3-month average: final rule signed October 15, 2008.

<sup>h</sup> For certain areas 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

The SDAB currently meets the NAAQS for all criteria air pollutants except O<sub>3</sub>, and meets the CAAQS for all criteria air pollutants except O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. For the 8-hour O<sub>3</sub> standard, the SDAB is currently designated as a moderate nonattainment area for the NAAQS. The SDAB is currently classified as a state “serious” O<sub>3</sub> nonattainment area and a state nonattainment area for PM<sub>10</sub> and PM<sub>2.5</sub>. Table 2 summarizes the attainment status of the SDAB for each criteria pollutant.

**Table 2 – Attainment Status – San Diego Air Basin**

<b>Pollutant</b>	<b>National Designation</b>	<b>California Designation</b>
O <sub>3</sub> (1-hour)	Attainment <sup>a</sup>	Nonattainment
O <sub>3</sub> (8-hour 1997) (8-hour 2008)	Attainment (Maintenance) Moderate Nonattainment	Nonattainment
NO <sub>2</sub>	Unclassified/Attainment	Attainment
CO	Attainment (Maintenance)	Attainment
SO <sub>2</sub>	Unclassified/Attainment	Attainment
PM <sub>10</sub>	Unclassified/Attainment	Nonattainment
PM <sub>2.5</sub>	Unclassified/Attainment	Nonattainment

Sources: USEPA 2019 (national); CARB 2019b (state).

**Notes:**

Attainment = meets the standards; Attainment (Maintenance) = achieve the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or Unclassifiable = insufficient data to classify; Unclassifiable/Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

<sup>a</sup>The federal 1-hour standard of 0.12 parts per million was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in SIPs.

As discussed in Section 2.2.1.2, Regulatory Setting, of the 2015 DEIR, the San Diego Air Pollution Control District (SDAPCD) is the agency responsible for administration of federal and state air quality laws. Included in the SDAPCD’s tasks are the monitoring of air pollution, the preparation of the County’s portion of the State Implementation Plan (SIP), and the promulgation of rules and regulations. The SIP includes strategies and tactics to be used to attain and maintain acceptable air quality in the County; this list of strategies is called the San Diego Regional Air Quality Strategy (RAQS). The rules and regulations include procedures and requirements to control the emission of pollutants and prevent significant adverse impacts.

The SDAPCD has adopted federal and state attainment plans; most recently, the 2016 Eight-Hour Ozone Attainment Plan for San Diego County (2008 O<sub>3</sub> NAAQS) (SDAPCD 2016a) and the 2016 Regional Air Quality Strategy (RAQS) (SDAPCD 2016b). The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the County, to forecast future emissions and identify the strategies necessary for the reduction of emissions through regulatory controls. The SDAPCD develops and implements plans and control measures designed to attain the AAQS as well as measures to reduce public health effects associated with criteria air pollutants.



## Health Effects of Criteria Pollutants and their Precursors

This section provides pollutant-specific information regarding O<sub>3</sub>, NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>, including information regarding the attainment status of the SDAB, likely health effects, and other relevant scientific data.

Ozone. The SDAB is currently classified as a moderate nonattainment area for the O<sub>3</sub> NAAQS, which means that the area experiences some exceedances of the NAAQS. The SDAB is also considered a nonattainment area for the CAAQS.

O<sub>3</sub> is considered a photochemical oxidant, which is a chemical that is formed when VOCs and NO<sub>x</sub> react in the presence of ultraviolet light. O<sub>3</sub> is formed through a complex set of reactions within the lower atmosphere in the presence of sunlight. Meteorology and terrain are major factors in the formation of O<sub>3</sub> in the atmosphere; the highest O<sub>3</sub> concentrations are typically measured in summer and early autumn when there is more sunlight. O<sub>3</sub> concentrations are also higher in inland areas of the SDAB due to trapping of pollutants by the mountains in the eastern portion of the County. For these reasons, O<sub>3</sub> is considered a regional pollutant with basin-wide effects, rather than localized effects.

Because O<sub>3</sub> is formed based on conditions within the air basin, the interaction of pollutants in the atmosphere, and the presence of sunlight, it is not possible to predict the effect of a single project on O<sub>3</sub> concentrations within the SDAB. O<sub>3</sub> modeling requires a basin-wide analysis that takes into account all sources within the SDAB. For this reason, neither the USEPA nor the SDACPD require single sources to conduct modeling to determine their potential effect on O<sub>3</sub> levels in the atmosphere.

O<sub>3</sub> is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to ozone. Health effects of O<sub>3</sub> include difficulty breathing; shortness of breath; coughing and sore or scratchy throat; inflammation and damage to the airways; aggravation of lung diseases such as asthma, emphysema, and chronic bronchitis; increased frequency of asthma attacks; increased susceptibility of the lungs to infection; and continued damage to the lungs even when the symptoms have disappeared. (USEPA 2015a, CARB 2019c.)

Nitrogen Dioxide. The SDAB is classified as attainment/unclassified for both the NAAQS and CAAQS for NO<sub>2</sub>.

NO<sub>2</sub> is a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of NO with oxygen.

Current scientific evidence links short-term NO<sub>2</sub> exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between breathing elevated short-term NO<sub>2</sub> concentrations, and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma. (CARB 2019d.)

Particulate Matter. The SDAB is currently classified by the USEPA as an attainment area for both the PM<sub>10</sub> and PM<sub>2.5</sub> under NAAQS. However, the SDAB is classified as a nonattainment area by CARB for the PM<sub>10</sub> and PM<sub>2.5</sub> under CAAQS.

Short-term and long-term exposure to PM<sub>10</sub> and PM<sub>2.5</sub> may result in adverse health effects. These effects include premature death in people with heart or lung disease; nonfatal heart attacks; irregular heartbeat; aggravated asthma; decreased lung functions; and increased respiratory symptoms, such as irritation of airways, coughing, or difficulty breathing. (USEPA 2015b.)

### **Scientific and Technical Complexities of Evaluating Health Effects from Criteria Pollutants**

At issue in the Friant Ranch decision was the fact that a development project's EIR did not connect its mass emission totals to specific adverse human health effects. Concerned with the sufficiency of the EIR as an informational document, and specifically whether the magnitude of project impacts was adequately disclosed, the California Supreme Court stated the following:

“The task for real party and the County is clear: The EIR must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must adequately explain what the agency *does* know and why, given existing scientific constraints, it cannot translate potential health impacts further.” (*Sierra Club*, 6 Cal.5th at 521 (emphasis in original).)

As discussed further below, at the time this Memorandum was prepared, no available modeling tools have been proven to be able to provide a reliable and meaningful analysis of correlation between an increase in mass totals or concentrations of criteria air pollutants from an individual project and specific health effects, or analysis of estimation of additional pollutant nonattainment days relative to the NAAQS and CAAQS due to a single project.

Formation of Secondary Pollutants. The California Supreme Court noted, in the Friant Ranch decision, that: “The raw numbers estimating the tons per year of ROG and NO<sub>x</sub> from the Project do not give any information to the reader about how much ozone is estimated to be produced as a result.” (*Sierra Club*, 6 Cal.5th at 520.)

In response, the formation of O<sub>3</sub> and PM in the atmosphere, as secondary pollutants, involves complex chemical and physical interactions of multiple pollutants from natural and anthropogenic sources, as further explained below. The complexity in how secondary pollutants are formed and dispersed has resulted in ongoing difficulties in measuring and regulating those pollutants.

Tropospheric, or ground level O<sub>3</sub>, is not emitted directly into the air, but is created by chemical reactions between NO<sub>x</sub> and VOCs. This happens when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources chemically react in the presence of sunlight. O<sub>3</sub> is most likely to reach unhealthy levels on hot sunny days in urban environments but can still reach high levels during colder months. O<sub>3</sub> can also be transported long distances by wind, so even rural areas can experience high O<sub>3</sub> levels. (USEPA 2018.)

The O<sub>3</sub> reaction is self-perpetuating (or catalytic) in the presence of sunlight because NO<sub>2</sub> is photochemically reformed from nitric oxide (NO). In this way, O<sub>3</sub> is controlled by both NO<sub>x</sub> and VOC emissions. (NRC 2005.)

Per the SDAPCD Eight-Hour Ozone Attainment Plan for San Diego County for the 2008 O<sub>3</sub> standard (SDACPD 2016a), the measured and projected O<sub>3</sub> trends from 2000 to 2036 for the SDAB signal future high VOC/NO<sub>x</sub> ratios in the San Diego region. Thus, it is anticipated that the San Diego region will become more NO<sub>x</sub>-limited; that is, O<sub>3</sub> concentrations tend to be restricted by the availability of NO<sub>x</sub> rather than VOC.

Nonetheless, the complexity of these interacting cycles of pollutants means that incremental decreases in one emission may not result in proportional decreases in O<sub>3</sub>. (NRC 2005.) Although these reactions and interactions are well understood, variability in emission source operations and meteorology creates uncertainty in the modeled O<sub>3</sub> concentrations to which downwind populations may be exposed. (NRC 2005.) This is especially true for individual projects, like the Proposed Project, where project-generated criteria air pollutant emissions are not derived from a single “point source,” but from mobile sources (cars and trucks) driving to, from and around the Project area and area sources (consumer products, architectural coating, natural gas fireplaces, etc.).

In many urban areas, O<sub>3</sub> nonattainment is not caused by emissions from the local area alone. (USEPA 2008.) Due to atmospheric transport, contributions of precursors from the surrounding region can also be important. (USEPA 2008.) Thus, in designing control strategies to reduce O<sub>3</sub> concentrations in a local area, it is often necessary to account for regional transport within the United States. In some areas, such as California, global transport of O<sub>3</sub> from beyond North America also can contribute to nonattainment areas. (USEPA 2008.)

PM can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, like O<sub>3</sub>, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO<sub>x</sub> and NO<sub>x</sub>. (SJVAPCD 2015.) In general, PM<sub>10</sub> is composed largely of primary particles, and a much greater portion of PM<sub>2.5</sub> contains secondary particles. (USEPA 2015b.) The secondary formation of PM<sub>2.5</sub> is dominated by a variety of chemical species or components of atmospheric particles, such as ammonium sulfate, ammonium nitrate, organic carbon mass, elemental carbon, and other soil compounds and oxidized metals. PM<sub>2.5</sub>, sulfate, nitrate, and ammonium ions are predominantly the result of chemical reactions of the oxidized products of SO<sub>2</sub> and NO<sub>x</sub> emissions with direct ammonia emission. (USEPA 2017a.)

Because of the complexity of secondary PM formation, including the potential to be transported long distances by wind, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area. (SJVAPCD 2015.) Further, and like ozone, because of the long-range transport of some pollutants, important emission sources may be far from the locations where measured pollutant concentrations exceed the AAQS. Thus, for areas experiencing higher ambient concentrations of pollutants, such as O<sub>3</sub> and PM, controlling emissions of those pollutants and their precursors is typically a regional, often multistate, problem, not a local one. (NRC 2005.)

Correlation to Health Effects. The San Joaquin Valley Air Pollution Control District (SJVAPCD) ties the difficulty of correlating the emission of criteria pollutants to health effects to how O<sub>3</sub> and PM are formed, as explained above. According to SJVAPCD, “even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like O<sub>3</sub> and some particulates, it remains impossible, using today’s models, to correlate that increase in concentration to a specific health impact [because] such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.” (SJVAPCD 2015.)

To demonstrate the relative scale between air basin-wide emissions used in photochemical and other regional modeling and Proposed Project-level emissions, emissions for the SDAB from the CARB California Emissions Projection Analysis Model (CEPAM) emissions inventory and estimated emissions from the Proposed Project are summarized below. CEPAM produces projected emissions that can then be gridded to serve as the emission input for photochemical modeling, and was used for the SDAPCD 2016 Revision of the Regional Air Quality Strategy for San Diego County. Including all sources except natural sources, total emissions for the SDAB for the CEPAM baseline year of 2012 is as follows: 129 tons per day for VOC, 111 tons per day of NO<sub>x</sub>, 71 tons per day of PM<sub>10</sub>, and 20 tons per day of PM<sub>2.5</sub>. (CARB 2019e.) For the Proposed Project’s buildout year of 2029, total projected emissions for the SDAB for all sources except natural, as forecasted by CEPAM, are as follows: 103 tons per day for VOC, 71 tons per day of NO<sub>x</sub>, 90 tons per day of PM<sub>10</sub>, and 21 tons per day of PM<sub>2.5</sub>. (CARB 2019e.)

The following section describes the relative contribution of the Proposed Project's emissions to regional pollutant concentrations.

### **Evaluation of Project Contributions**

Ozone. As discussed above, because O<sub>3</sub> is formed based on conditions within the air basin, the interaction of pollutants in the atmosphere, and the presence of sunlight, it is not possible to predict the impact of a single project on O<sub>3</sub> concentrations within the San Diego Air Basin.

When developing the State Implementation Plan, which is the San Diego region's plan for attaining and maintaining the O<sub>3</sub> standards, the SDAPCD conducts modeling to evaluate the impacts of emission sources on air quality within the San Diego Air Basin. Within the basin-wide emissions inventory, construction emissions are modeled based on the overall anticipated growth within the region based on SANDAG's Regional Growth Forecasts. Emissions from vehicles also are projected based on anticipated growth within the region based on SANDAG's Regional Growth Forecasts. As discussed in Draft EIR Section 1.8<sup>2</sup>, the proposed Project's population, housing, and employment projections are included in SANDAG's Regional Growth Forecasts. Because the Project is included within the forecasts that were used to develop the State Implementation Plan, the Project's emissions already are accounted for in future forecasts, and the Project would not result in additional exceedances of the O<sub>3</sub> standard and, therefore, would not result in any additional health impacts.

Nevertheless, to evaluate the Project's contribution to regional O<sub>3</sub> concentrations, Table 3 presents the Project's construction and operational emissions, in tons per day, in comparison with the regional emissions projected by CARB for 2020, 2025, and 2030. Emissions from construction were evaluated for 2020 and 2025. Emissions from operation were evaluated for 2025 (project buildout) and 2030. Table 3 also presents background O<sub>3</sub> concentrations for the period from 2010 through 2013 as reported in the Draft EIR<sup>3</sup>. To estimate the Project's contribution to regional O<sub>3</sub> concentrations, it was conservatively estimated that the contribution to O<sub>3</sub> concentrations in the San Diego Air Basin would be proportional to the fraction of emissions attributable to the Project versus the basin-wide emissions.

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<sup>2</sup> Draft EIR Section 1.8, Page 1.0-36.

<sup>3</sup> Draft EIR Section 2.2, Table 2.2-2, Page 2.2-22.

Table 3 Project Contribution to Ambient Ozone Concentrations Otay Ranch Resort Village							
Criteria Pollutant	Existing Peak Background 8-hour O <sub>3</sub> Concentration (ppm) <sup>1</sup>	CAAQ S	NAAQ S	Project Emissions (tons/day) <sup>2</sup>	CARB Projection s of SDAB Emissions (tons/day) <sup>3</sup>	Percent of Regional Emission s	Adjusted 8-hour O <sub>3</sub> Concentratio n (ppm) <sup>4</sup>
Construction, 2020							
NOx	0.083	0.070	0.070	0.512	68	0.752	0.0836
VOC <sup>5</sup>				0.048	114	0.042	
Construction, 2025							
NOx	0.083	0.070	0.070	0.512	56	0.914	0.0838
VOC <sup>5</sup>				0.048	111	0.043	
Operations, 2025							
NOx	0.083	0.070	0.070	0.059	56	0.105	0.0832
VOC				0.096	111	0.086	
Operations, 2030							
NOx	0.083	0.070	0.070	0.059	51	0.116	0.0832
VOC				0.096	111	0.086	

<sup>1</sup>Peak 8-hour background concentrations for 2010-2013, see Draft EIR Table 2.2-2.

<sup>2</sup>Maximum daily construction emissions, see Draft EIR Table 2.2-4; mitigated maximum daily operational emissions, see Draft EIR Table 2.2-7.

<sup>3</sup>From CARB 2013 Almanac, Chapter 4, reported in tons/day, annual average. <http://www.arb.ca.gov/aqd/almanac/almanac13/pdf/chap413.pdf>

<sup>4</sup>Based on the basin-wide percent increase in NO<sub>x</sub> emissions added to the background O<sub>3</sub> levels plus the basin-wide percent increase in VOC emissions added to the background O<sub>3</sub> levels.

<sup>5</sup>Because VOC emissions contribute to the formation of ozone, they are presented here. However, please note that the Project's construction-related VOC emissions would be less than significant with mitigation.

As shown in Table 3, even if the emissions from construction and operation were not included in the SANDAG Regional Growth Forecasts that form the basis of the State Implementation Plan, the Project's contribution to overall ambient O<sub>3</sub> levels would not result in a substantial contribution to O<sub>3</sub> concentrations within the San Diego Air Basin. For most days which do not exceed the CAAQS or NAAQS for O<sub>3</sub>, no exceedances of these standards would likely occur due to the small increase due to Project emissions. Accordingly, the proposed Project's NO<sub>x</sub> and VOC emissions are not expected to cause any increase in related regional health effects for O<sub>3</sub>.

**Nitrogen Dioxide.** The Project's NO<sub>2</sub> emissions are mainly associated with construction-related equipment and vehicles, and with vehicles operated at build-out. Accordingly, emissions from these sources would not be localized in a single area. Rather, the emissions from on-road vehicles, which are the main contributor to operational emissions, would be distributed on roadways within the San Diego Air Basin. The San Diego Air Basin is an attainment area for the NO<sub>2</sub> standard, and no exceedances have been recorded at the Chula Vista monitoring station.

The potential contribution of sources of NO<sub>x</sub> to NO<sub>2</sub> concentrations is also dependent on a number of factors, including the distribution of the sources (on-road vehicles),

and the conversion of NO<sub>x</sub> to NO<sub>2</sub> in the atmosphere. However, for conservative purposes, it was assumed that all of the emissions from construction and from operation could contribute to ambient NO<sub>2</sub> concentrations, and that all of the NO<sub>x</sub> emitted from the Project would be converted to NO<sub>2</sub>. Table 4 presents an analysis of the potential contribution of NO<sub>2</sub> emissions to NO<sub>2</sub> concentrations in the Project area.

<b>Table 4</b> <b>Project Contribution to Ambient NO<sub>2</sub> Concentrations</b> <b>Otay Ranch Resort Village</b>							
Criteria Pollutant	Existing Peak Background 1-hour NO <sub>2</sub> Concentration (ppm) <sup>1</sup>	CAAQS	NAAQS	Project Emissions (tons/day) <sup>2</sup>	CARB Projections of SDAB Emissions (tons/day) <sup>3</sup>	Percent of Regional Emissions	Adjusted 1-hour NO <sub>2</sub> Concentration (ppm) <sup>4</sup>
Construction, 2020							
NO <sub>x</sub>	0.057	0.18	0.100	0.512	68	0.752	0.0574
Construction, 2025							
NO <sub>x</sub>	0.057	0.18	0.100	0.512	56	0.914	0.0575
Operations, 2025							
NO <sub>x</sub>	0.057	0.18	0.100	0.059	56	0.105	0.0571
Operations, 2030							
NO <sub>x</sub>	0.057	0.18	0.100	0.059	51	0.116	0.0571

<sup>1</sup>Peak 1-hour background concentrations for 2010-2013, Draft EIR, Table 2.2-2.

<sup>2</sup>Maximum daily construction emissions, Draft EIR, Table 2.2-4; mitigated maximum daily operational emissions, Draft EIR, Table 2.2-7.

<sup>3</sup>From ARB 2013 Almanac, Chapter 4, reported in tons/day, annual average. <http://www.arb.ca.gov/aqd/almanac/almanac13/pdf/chap413.pdf>

<sup>4</sup>Based on the basin-wide percent increase in NO<sub>x</sub> emissions added to the background NO<sub>2</sub> level.

As shown in Table 4, the Project's contribution of NO<sub>x</sub> emissions to NO<sub>2</sub> concentrations in the San Diego Air Basin is not expected to cause an exceedance of the ambient air quality standards for NO<sub>2</sub>. Therefore, the proposed Project's NO<sub>x</sub> emissions are not expected to cause any increase in related regional health effects for NO<sub>2</sub>.

**Particulate Matter.** PM emissions associated with the proposed Project include fugitive dust emissions from construction activities and emissions from off- and on-road equipment associated with construction; and emissions from operational activities. The main source of operational PM emissions is motor vehicles, and the main contributors are fugitive emissions associated with road dust, brake wear, and tire wear. Accordingly, similar to operational NO<sub>x</sub> emissions, PM<sub>10</sub> and PM<sub>2.5</sub> would be distributed on roadways within the San Diego Air Basin.

Table 5 presents an analysis of the potential contribution of PM<sub>10</sub> emissions to PM<sub>10</sub> concentrations in the Project area.

<b>Table 5</b> <b>Project Contribution to Ambient PM<sub>10</sub> Concentrations</b> <b>Otay Ranch Resort Village</b>							
Criteria Pollutant	Existing Peak Background 24-hour PM <sub>10</sub> Concentration (µg/m <sup>3</sup> ) <sup>1</sup>	CAAQS	NAAQS	Project Emissions (tons/day) <sup>2</sup>	CARB Projections of SDAB Emissions (tons/day) <sup>3</sup>	Percent of Regional Emissions	Adjusted 24-hour PM <sub>10</sub> Concentration (ppm) <sup>4</sup>
Construction, 2020							
PM <sub>10</sub>	46	50	150	2.371	74	3.20	47.47
Construction, 2025							
PM <sub>10</sub>	46	50	150	2.371	75	3.16	47.45
Operations, 2025							
PM <sub>10</sub>	46	50	150	0.068	75	0.091	46.04
Operations, 2030							
PM <sub>10</sub>	46	50	150	0.068	76	0.089	46.04

<sup>1</sup>Peak 24-hour background concentrations for 2010-2013, California average; see Draft EIR Table 2.2-2.

<sup>2</sup>Maximum daily construction emissions, see Draft EIR Table 2.2-4; mitigated maximum daily operational emissions, see Draft EIR Table 2.2-7. These emissions are conservative because they include blasting emissions, which were modeled assuming that all blasting is surface blasting; in reality, emissions would be lower because blasting would be underground.

<sup>3</sup>From CARB 2013 Almanac, Chapter 4, reported in tons/day, annual average; see <http://www.arb.ca.gov/aqd/almanac/almanac13/pdf/chap413.pdf>

<sup>4</sup>Based on the basin-wide percent increase in PM<sub>10</sub> emissions added to the background PM<sub>10</sub> level.

As shown in Table 5, the Project's contribution of PM<sub>10</sub> emissions to PM<sub>10</sub> concentrations in the San Diego Air Basin is not expected to cause an exceedance of the ambient air quality standards for PM<sub>10</sub>. Therefore, the proposed Project's PM<sub>10</sub> emissions are not expected to cause any increase in related regional health effects for PM<sub>10</sub>.

Table 6 presents an analysis of the potential contribution of PM<sub>2.5</sub> emissions to PM<sub>2.5</sub> concentrations in the Project area.



<b>Table 6</b> <b>Project Contribution to Ambient PM<sub>2.5</sub> Concentrations</b> <b>Otay Ranch Resort Village</b>						
Criteria Pollutant	Existing Peak Background 24-hour PM <sub>2.5</sub> Concentration (µg/m <sup>3</sup> ) <sup>1</sup>	NAAQS	Project Emissions (tons/day) <sup>2</sup>	SDAB Emissions (tons/day) <sup>3</sup>	Percent of Regional Emissions	Adjusted 24-hour PM <sub>10</sub> Concentration (ppm) <sup>4</sup>
Construction, 2020						
PM <sub>2.5</sub>	24.3	35	0.228	19	12	27.22
Construction, 2025						
PM <sub>2.5</sub>	24.3	35	0.228	20	11.4	27.07
Operations, 2025						
PM <sub>2.5</sub>	24.3	35	0.021	20	1.05	24.56
Operations, 2030						
PM <sub>2.5</sub>	24.3	35	0.021	20	1.05	24.56

<sup>1</sup>The NAAQS for PM<sub>2.5</sub> is based on the 98<sup>th</sup> percentile of three years of monitoring data, and is not defined by a single exceedance. The highest 98<sup>th</sup> percentile reported by CARB at <http://www.arb.ca.gov/adam/topfour/topfourdisplay.php> for the Chula Vista monitoring station is shown in the table.

<sup>2</sup>Maximum daily construction emissions, see Draft EIR Table 2.2-4; mitigated maximum daily operational emissions, see Draft EIR Table 2.2-7. These emissions are conservative because they include blasting emissions, which were modeled assuming that all blasting is surface blasting; in reality, emissions would be lower because blasting would be underground.

<sup>3</sup>From ARB 2013 Almanac, Chapter 4, reported in tons/day, annual average. <http://www.arb.ca.gov/aqd/almanac/almanac13/pdf/chap413.pdf>

<sup>4</sup>Based on the basin-wide percent increase in PM<sub>2.5</sub> emissions added to the background PM<sub>2.5</sub> level.

As shown in Table 6, the Project's contribution of PM<sub>2.5</sub> emissions to PM<sub>2.5</sub> concentrations in the San Diego Air Basin is not expected to cause an exceedance of the ambient air quality standard for PM<sub>2.5</sub>. Therefore, the proposed Project's PM<sub>2.5</sub> emissions are not expected to cause any increase in related regional health effects for PM<sub>2.5</sub>.

**Limitations of Current Analyses.** The South Coast Air Quality Management District (SCAQMD) used O<sub>3</sub>, which is formed from the chemical reaction of NO<sub>x</sub> and VOCs in the presence of sunlight, as an example of why it is impracticable to determine specific health outcomes from criteria pollutants for all but very large, regional-scale projects. First, forming O<sub>3</sub> "takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources." Second, "it takes a large amount of additional precursor emissions (NO<sub>x</sub> and VOCs) to cause a modeled increase in ambient ozone levels over an entire region," with a 2012 study showing that "reducing NO<sub>x</sub> by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion." SCAQMD thus concludes that it "does not currently know of a way to accurately quantify O<sub>3</sub>-related health impacts caused by NO<sub>x</sub> or VOC emissions from relatively small projects." (SCAQMD 2015.)

Essentially, SCAQMD takes the position that a project emitting only 10 tons per year of NO<sub>x</sub> or VOC is small enough that its regional impact on ambient O<sub>3</sub> levels may not

be detected in the regional air quality models that are currently used to determine O<sub>3</sub> levels; thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO<sub>x</sub> with specific health effects from O<sub>3</sub>. (SCAQMD 2015.) Therefore, lead agencies that use SCAQMD's thresholds of significance may determine that many projects have "significant" air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health effects.

Effects on Number of Nonattainment Days. In regard to regional concentrations and air basin attainment, the SJVAPCD has found that attempting to identify a change in background pollutant concentrations that can be attributed to a single project, even one as large as the entire Friant Ranch Specific Plan, is a theoretical exercise. The SJVAPCD brief's in the Friant Ranch judicial proceedings noted that it "would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have." The situation is further complicated by the fact that background concentrations of regional pollutants are not uniform either temporally or geographically throughout an air basin but are constantly fluctuating based upon meteorology and other environmental factors. As discussed above, the currently available modeling tools are equipped to model the impact of all emission sources in the San Joaquin Valley Air Basin on attainment. The SJVAPCD brief then indicated that, "Running the photochemical grid model used for predicting O<sub>3</sub> attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO<sub>x</sub> and VOC in the Valley) is not likely to yield valid information given the relative scale involved." (SJVAPCD 2015.)

Methods Evaluated. As of the time of preparing this Memorandum, no specific tools have been established for use in preparing CEQA analysis to connect criteria air pollutant emissions from an individual project to specific health effects. Similarly, no specific tools have been established for use in preparing National Environmental Policy Act (NEPA) documents that provide the discussed correlation.

In their responses to comments on the Otay Ranch Village 14 EIR, Dudek evaluated existing modeling tools and calculation methods established for other purposes and uses, in order to determine whether such tools and methods could potentially be used for purposes of CEQA in a manner that would address the Friant Ranch decision and provide reliable and meaningful results. (Dudek 2019.) As illustrated in Dudek's evaluation of existing modeling tools and calculation methods, the available tools and methods do not correlate data in the manner contemplated by the Friant Ranch decision. A summary of the discussion in Dudek's response is provided in Table 7 below.

**Table 7 – Summary of Existing Modeling Tools and Calculation Methods**

<b>Modeling Tool</b>	<b>Purpose</b>	<b>Limitations</b>
California Emissions Estimator Model (CalEEMod)	CalEEMod estimates emissions of ROG, NO <sub>x</sub> , CO, SO <sub>x</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> in mass daily emissions (pounds per day) and mass annual emissions (tons per year). For PM <sub>10</sub> and PM <sub>2.5</sub> , CalEEMod estimates exhaust and fugitive dust emissions separately.	CalEEMod does not estimate concentrations of air pollutants and does not estimate emissions of secondary pollutants such as O <sub>3</sub> and PM <sub>2.5</sub> , nor does it estimate potential health effects of a project.
American Meteorological Society/EPA Regulatory Model	AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. AERMOD can estimate pollutant concentrations of NO <sub>x</sub> , NO <sub>2</sub> , CO, SO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , total suspended particulates, lead, and other pollutants.	AERMOD cannot estimate concentrations of O <sub>3</sub> or secondary PM. AERMOD does not reliably and meaningfully connect pollutant concentrations to specific health effects. AERMOD cannot estimate additional nonattainment days resulting from the project's pollutant concentration contribution.
SCAQMD Localized Significance Threshold	SCAQMD developed a localized significance threshold (LST) analysis in response to CARB Governing Board's Environmental Justice Enhancement Initiative I-4. LST lookup tables provide a simple tool for evaluating the impacts from small, typical projects, and utilize mass rate look-up tables allow a user to determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts. LST look-up tables are based on air dispersion modeling conducted by the SCAQMD, which was used to develop the tables.	LSTs have only been established for localized (onsite) emissions of NO <sub>2</sub> , CO, PM <sub>10</sub> , and PM <sub>2.5</sub> . LSTs are specific to source receptor areas, which take into account ambient air quality as measured by SCAQMD monitoring stations in or near the source receptor area, within the SCAQMD jurisdictional boundaries (SCAQMD 2008). Use of the SCAQMD LST analysis outside of the SCAQMD is not appropriate. The LST analysis does not connect pollutant concentrations to specific health effects, nor does the LST analysis estimate additional nonattainment days resulting from the project's pollutant concentration contribution.
Toxic Air Contaminant Health Risk Assessments (HRAs)	HRA includes a comprehensive analysis of the dispersion of hazardous substances, the	HRAs cannot be conducted for criteria air pollutants as current modeling tools, such as

Modeling Tool	Purpose	Limitations
	<p>potential for human exposure, and a quantitative assessment of both individual and population wide health risks (CARB 2018). OEHHA's Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (Guidance Manual) includes a description of the algorithms, recommended exposure variates, cancer and noncancer health values, and the air modeling protocols needed to perform a HRA under the Air Toxics Hot Spots Information and Assessment Act of 1987 (Health and Safety Code Section 44300 et seq.) (OEHHA 2015). HRAs typically use AERMOD, which, as explained above, is a dispersion model that can estimate concentrations of certain pollutants. HRAs typically also uses CARB's Hotspots Analysis and Reporting Program (HARP), which is a software suite that addresses the programmatic requirements of the Air Toxics "Hot Spots" Program (Assembly Bill 2588).</p>	<p>AERMOD and HARP, are not set-up to estimate health effects from criteria air pollutants. Furthermore, as discussed above, AERMOD cannot estimate secondary pollutant impacts, does not reliably and meaningfully connect pollutant concentrations to specific health effects, and cannot estimate additional nonattainment days resulting from the project's pollutant concentration contribution.</p>
Reference Exposure Levels (RELs)	<p>Inhalation RELs are air concentrations or doses at or below which adverse noncancer health effects are not expected even in sensitive members of the general population under specified exposure scenarios. All criteria air pollutants have established acute RELs by OEHHA except for PM<sub>10</sub> and PM<sub>2.5</sub> because PM in and of itself does not have known acute or chronic effects, rather the components of PM (including TACs) have the known effects. The hazard index target organs for the inhalation RELs include: respiratory system/eyes for O<sub>3</sub>,</p>	<p>It is possible using air dispersion models (such as AERMOD) to estimate the concentration of a primary air pollutant emitted from a project from various sources. This concentration could then be compared to the REL for each criteria air pollutant. However, even if a REL is exceeded, the conclusion would be an increasing but undefined probability of resulting in an adverse health effect.</p>

Modeling Tool	Purpose	Limitations
	<p>respiratory system for NO<sub>2</sub>, cardiovascular system for CO, and respiratory system for SO<sub>2</sub> (OEHHA 2016). The REL is not the threshold where population health effects would first be seen. However, levels of exposure above the REL have an increasing, but undefined, probability of resulting in an adverse health effect, particularly in sensitive individuals (e.g., depending on the toxicant, the very young, the elderly, pregnant women, and those with acute or chronic illnesses) (OEHHA 2015). Using RELs to evaluate health effects requires an estimate of atmospheric concentration based on mass emission rates.</p>	
Regional Photochemical Models	<p>Photochemical air quality models have become widely recognized and routinely utilized tools for regulatory analysis and attainment demonstrations by assessing the effectiveness of control strategies. These photochemical models are large-scale air quality models that simulate the changes of pollutant concentrations in the atmosphere using a set of mathematical equations characterizing the chemical and physical processes in the atmosphere. These models are applied at multiple spatial scales, including local, regional, national, and global (USEPA 2017b).</p>	<p>As explained in the SJVAPCD brief filed in conjunction with the Friant Ranch judicial proceedings and noted previously, running the photochemical grid model used for predicting O<sub>3</sub> attainment with the emissions solely from an individual project like the Friant Ranch project or the Proposed Project is not likely to yield valid information given the relative scale involved. In addition, and similarly noted previously, even if local increases in concentrations of pollutants can be estimated, there is currently no way to accurately correlate that increase in concentration to a specific health effect as current models are not accurate when applied at the local level. Accordingly, use of photochemical models have not been demonstrated to provide reliable and meaningful results for an individual project.</p>
Methodology for Estimating Premature Deaths Associated with Long-term PM <sub>2.5</sub> Exposure	CARB has developed a methodology to estimate premature deaths from large	SCAQMD staff concluded that use of this methodology for a small source could result in unreliable findings and would

Modeling Tool	Purpose	Limitations
	amounts of PM <sub>2.5</sub> (CARB 2008).	not provide meaningful information; while it may be technically possible to plug the data into the methodology, the results would not be considered reliable or meaningful (SCAQMD 2015).
EPA Photochemical Grid Models for Single-Source Ozone and Secondary PM <sub>2.5</sub> Impacts for Permitting	<p>On January 17, 2017, USEPA published (82 FR 5182) revisions to the Guideline on Air Quality Models, referred to as Appendix W, including criteria and process steps for choosing single-source analytical techniques or models to estimate O<sub>3</sub> impacts from precursor NO<sub>x</sub> and VOC emissions and concentrations of direct and secondarily-formed PM<sub>2.5</sub>. USEPA has developed a two-tiered demonstration approach for addressing single-source impacts on O<sub>3</sub> and secondary PM<sub>2.5</sub>. Tier 1 demonstration involve use of technically credible relationships between emissions and ambient impacts based on existing modeling studies, and Tier 2 demonstration involves case-specific application of chemical transport modeling (e.g., with an Eulerian grid or Lagrangian model).</p> <p>In development of the Modeled Emission Rates for Precursors (MERPs) for the PSD Tier 1 Demonstration Tool, USEPA modeled theoretical single-sources projects located throughout the continental United States. These projects were modeled at a low and high stack height of 1 meter (m) and 90 m, respectively; stack diameter of 5 m; exit temperature of 100 Fahrenheit (°F); and exit velocity of 27 meters per second (89 feet per second). The hypothetical sources included multiple emission rates: 100, 300, 500,</p>	<p>While USEPA has recently published PSD SILs for O<sub>3</sub> and PM<sub>2.5</sub>, April 17, 2018, USEPA has acknowledged the complexity of modeling single-source project impacts with the development of a tiered approach discussed above and detailed in Appendix W. While the development of PSD SILs and Appendix W modeling methodology provides evidence of potential modeling to support the evaluation of project impacts under CEQA reviews, there are technical differences between stationary source projects regulated under the PSD program compared to land use development projects regulated under CEQA that result in uncertainty of results.</p> <p>CEQA requires review of all project-generated criteria air pollutant emissions, including emissions resulting from stationary sources, mobile sources, construction sources, operational, and maintenance activities and includes secondarily generated emissions from energy usage, water, solid waste, and wastewater generation. Many CEQA project emissions, like those for the Proposed Project, are dominated by mobile sources and fugitive emission sources with essentially no vertical plume velocity and have very different dispersion characteristics as compared to PSD major sources like those modeled for MERPs.</p>

Modeling Tool	Purpose	Limitations
	1,000, 2,000, and 3,000 tons per year.	Therefore, there is uncertainty of the results of applying performance evaluations from the PSD project examples to CEQA project emissions given the complexity of modeling the photochemical reactions resulting in O <sub>3</sub> formation and secondary PM <sub>2.5</sub> , as discussed above. At this time, to our knowledge, chemical transport modeling of the formation of O <sub>3</sub> and PM <sub>2.5</sub> has not been proven under performance evaluations to show that the available modeling techniques are not inappropriately biased for CEQA projects.
Benefits Mapping and Analysis Program—Community Edition (BenMAP-CE)	(BenMAP-CE) estimates the number and economic value of health effects resulting from changes in air pollution concentrations (USEPA 2015c).	While BenMAP-CE can be used on a local-scale if accurate input information is available, using BenMAP-CE for a project-level analysis in CEQA has not yet been demonstrated to provide meaningful results in a CEQA context. Furthermore, BenMAP-CE requires an estimate of atmospheric concentration that must be derived from mass emission rates, which is subject to the limitations described under dispersion models and photochemical models.
Benefit or Incidents per Ton Factors	In 2013, USEPA published a Technical Support Document (TSD) describing an approach for estimating the average avoided human health effects, and monetized benefits related to emissions of PM <sub>2.5</sub> and PM <sub>2.5</sub> precursors, including NO <sub>x</sub> and SO <sub>2</sub> , from 17 sectors using the results of source apportionment photochemical modeling (USEPA 2013). In 2017, USEPA released a new version of its BenMAP-CE tool that incorporated new demographic and economic parameters. Using the 2017 version of BenMAP-CE, USEPA re-	The benefit or incidents per ton factor assessment, while useful for economic valuations during rulemaking for regulatory controls that would reduce substantial quantities of air pollutant emissions, in its current form, has too substantial of uncertainties when applied to individual projects to be used for CEQA analyses with a level of accuracy. Therefore, as currently used by CARB and USEPA, the benefit or incidents per ton factor assessment is determined to not provide

Modeling Tool	Purpose	Limitations
	calculated the PM <sub>2.5</sub> benefit per ton values. CARB has similarly developed incidents per ton values to evaluate costs versus benefits of air quality rules and regulations.	reliable and meaningful results for individual projects.

Conclusion. As explained above, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days. Neither the SJVAPCD nor the SCAQMD have identified a method to connect project-generated criteria air pollutant emissions to specific health effects for individual development projects. Currently, there are no modeling tools that could provide reliable and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects, as explained above. Instead, air pollution control districts have set thresholds that seek to minimize concentrations of criteria air pollutants through the control of directly emitted emissions and precursors.

Discussions with both the SMAQMD and the SCAQMD indicate that they are working toward developing a tool for projects within their air pollution control districts that would allow CEQA projects to compare their mass emissions with thresholds derived from photochemical modeling<sup>4</sup> that would be conducted by the air pollution control districts themselves. However, such tools are not currently available, and when they are developed, they will be specific to the air basins in question because they would be based on SMAQMD and SCAQMD-specific modeling. No such tool is currently available for the SDAB.<sup>5</sup>

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<sup>4</sup> July 12, 2019 discussions with Paul Philley, SMAQMD, and Lijin Sun, SCAQMD.

<sup>5</sup> July 11, 2019 communication from Eric Luther, SDAPCD.



## Evaluation of the Proposed Project's Health Effects

As explained above, the USEPA and CARB have established AAQS at levels above which concentrations could be harmful to human health and welfare, with an adequate margin of safety. California air pollution control districts, including the SDAPCD, have established emission-based thresholds that provide project-level estimates of criteria air pollutant quantities that air basins can accommodate without affecting the attainment dates for the AAQS. The County of San Diego based their CEQA air quality significance thresholds on SDAPCD Rule 1501 (Conformity of General Federal Actions) and Rule 20.2 (New Source Review (NSR)-Non-Major Stationary Sources). Accordingly, elevated levels of criteria air pollutants as a result of the Proposed Project's exceedances of emission-based thresholds could cause adverse health effects associated with these pollutants.

As discussed in the 2015 DEIR, construction of the Proposed Project is estimated to exceed County thresholds for VOC, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. It should be noted that emissions of PM were mainly attributable to blasting activities, assuming surface blasting. Blasting and rock crushing emissions were addressed in a Technical Memorandum (SRA 2015a), in which the estimated emissions were refined; however, emissions of PM<sub>10</sub> and PM<sub>2.5</sub> were still estimated to exceed the County thresholds. During construction, blasting activities will actually involve underground blasting rather than surface blasting, which will result in lower emissions of PM<sub>10</sub> and PM<sub>2.5</sub> than disclosed in the 2015 DEIR. Because no accurate emission factors are available for the type of underground blasting proposed, the Air Quality Technical Report and Technical Memorandum present a worst-case analysis of PM emissions.

A Technical Memorandum was also prepared to address the VOC emissions from architectural coatings use and the effect of including an additional mitigation measure to reduce VOC content of coatings (SRA 2015b). With implementation of the additional mitigation measure, which requires the use of coatings that meet the VOC content of SCAQMD Rule 1113, VOC emissions during construction would be reduced to below the County's significance threshold.

Operation of the Proposed Project is estimated to exceed County thresholds for VOC, CO, and PM<sub>10</sub> after mitigation is incorporated. A Technical Memorandum was prepared for the 2015 DEIR demonstrating that emissions of CO, while above the County's mass emission thresholds, would not result in a CO "hot spot", or exceedance of the national or state CO standard. (SRA 2015c.)

As shown above in Table 2, the SDAB is designated as a nonattainment area for O<sub>3</sub> under the NAAQS and the CAAQS, and nonattainment for PM<sub>10</sub> and PM<sub>2.5</sub> under the CAAQS. And as also discussed above, health effects associated with O<sub>3</sub> include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue. (CARB 2019c.)

VOCs and NO<sub>x</sub> are precursors to O<sub>3</sub>, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS. The contribution of VOCs and NO<sub>x</sub> to regional ambient O<sub>3</sub> concentrations is the result of complex photochemistry. The increases in O<sub>3</sub> concentrations in the SDAB due to O<sub>3</sub> precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O<sub>3</sub> concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O<sub>3</sub> AAQS tend to occur between April and October when solar radiation is highest. The holistic effect of a single project's emissions of O<sub>3</sub> precursors is speculative because of the lack of quantitative methods to assess this impact. Nonetheless, because VOC and NO<sub>x</sub> emissions associated with Proposed Project construction and/or operation would exceed the County's mass daily construction threshold, it could minimally contribute to regional O<sub>3</sub> concentrations and the associated health effects.

Health effects associated with NO<sub>x</sub> include lung irritation and enhanced allergic responses. (CARB 2019d.) Health effects that result from NO<sub>2</sub> and NO<sub>x</sub> include respiratory irritation. Although the Proposed Project construction would generate NO<sub>x</sub> emissions that would exceed the County's mass daily threshold, it is unlikely that construction of the Proposed Project would contribute to exceedances of the NAAQS and CAAQS for NO<sub>2</sub> because the SDAB is designated as in attainment of the NAAQS and CAAQS for NO<sub>2</sub> and the existing NO<sub>2</sub> concentrations in the area are well below the NAAQS and CAAQS standards. Nonetheless, because there are nearby receptors that could be affected by off-road construction equipment (primary source of NO<sub>x</sub>), the Proposed Project could result in potential health effects associated with NO<sub>2</sub> and NO<sub>x</sub>.

Health effects associated with PM<sub>10</sub> and PM<sub>2.5</sub> include premature death and hospitalization, primarily for worsening of respiratory disease. (CARB 2019f.) Because construction and operation of the Proposed Project would exceed the County threshold for PM<sub>10</sub>, and construction of the Proposed Project would exceed the County threshold for PM<sub>2.5</sub>, the Proposed Project would potentially contribute to exceedances of the CAAQS for PM<sub>10</sub> and PM<sub>2.5</sub> or could obstruct the SDAB from coming into attainment of the PM<sub>10</sub> CAAQS. As such, the Project's potential contribution of PM<sub>10</sub> and PM<sub>2.5</sub> during construction and operation could result in health effects related to PM<sub>10</sub> and PM<sub>2.5</sub>.

This Technical Memorandum provides an evaluation of the relative contribution of emissions from construction and operation versus County-wide emissions, and an evaluation of the potential results in adverse effects to health. However, in an abundance of caution, given the lack of quantitative tools to evaluate the magnitude, frequency, and location of effects, it is not possible to conclude that there would be no effects associated with construction and operation of the Proposed Project.

In summary, because construction and/or operation of the Proposed Project could result in exceedances of the County's significance thresholds for VOC, NO<sub>x</sub>, CO,

PM<sub>10</sub> and PM<sub>2.5</sub>, the Proposed Project would potentially result in health effects associated with those pollutants. Because the Proposed Project would not exceed the County thresholds for SO<sub>x</sub>, and because the County thresholds are based on levels that the SDAB can accommodate without affecting the attainment date for the AAQS and the AAQS are established to protect public health and welfare, the Proposed Project is not anticipated to result in health effects associated with SO<sub>x</sub>.

As of the time of preparation of this Memorandum, no modeling tools have been developed, as explained above, that could provide reliable and meaningful additional information regarding the potential health effects or potential for further nonattainment days from criteria air pollutants generated by the Proposed Project.

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